

MATHEMATICS

تصريح وتحت إشراف

MINISTRY OF EDUCATION AND TECHNICAL EDUCATION

Primary Three

First Term

2021

Parents` Guide

3

MATHEMATICS

Primary Three

First Term

Name : ....

Class : ....

School : ....





Parents` Guide 2021

Prepared by a Group of Experts



Chapter (1)

Chapter (2)

Chapter (3)



Chapter (4)

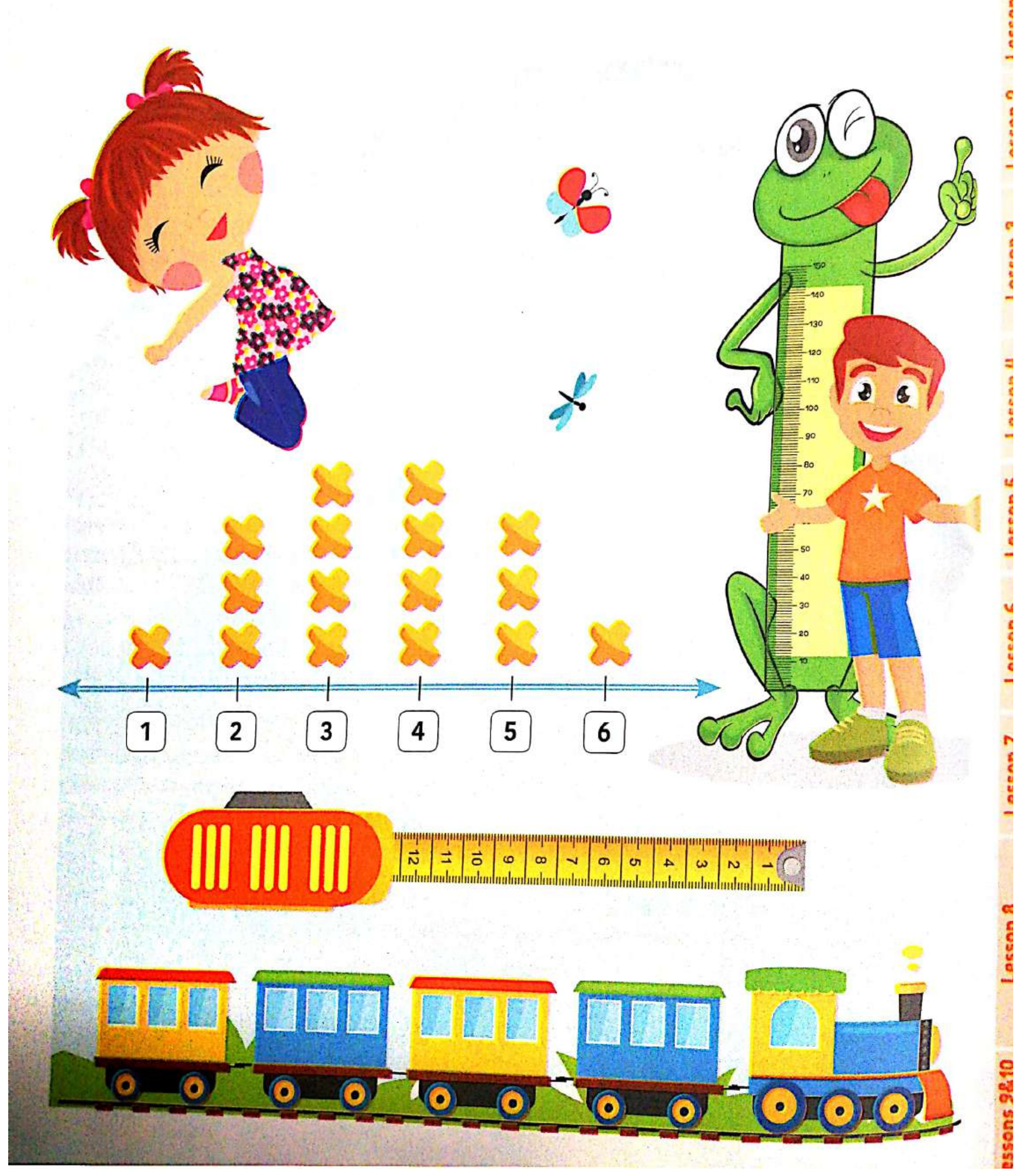
Chapter (5)

Chapter (6)






Chapter 1



Pacing Guide

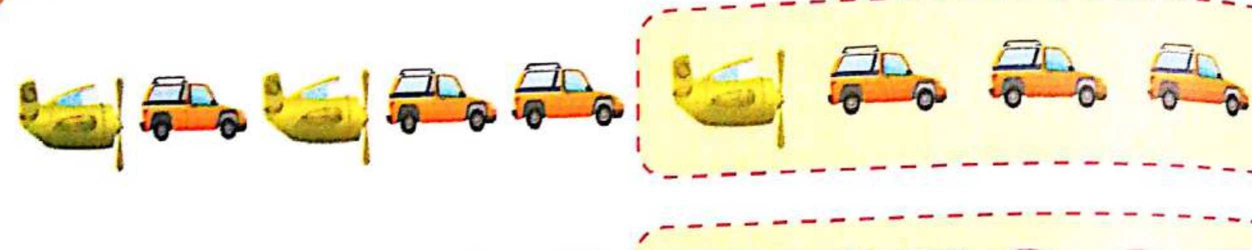
Lesson	Instructional Focus	Key vocabulary
Lesson 1	**Patterns** • Identify repeating arithmetic patterns. • Determine the next 2 elements in a pattern.	• Number pattern • Increase • Element • Visual pattern
Lesson 2	**Bar graph** • Identify elements of a bar graph. • Organize, represent, and analyze data from a bar graph.	• Vertical • Horizontal • Axis • Scale • Tally marks
Lesson 3	**Pictograph** • Identify elements of a pictograph. • Explain the meaning of scale in a pictograph. • Create a pictograph from a data table. • Determine an appropriate graphing question.	• Key • Pictograph
Lesson 4	**Line plot** • Identify the elements of a line plot. • Collect and record data. • Create a line plot.	• Frequency • Line plot • Number line • Numerical data
Lesson 5	**Measuring length in centimeter (cm)** • Discuss centimeter measurement. • Measure the length of objects in centimeters.	• Benchmark • Centimeter • Length • Units
Lesson 6	**Estimation of the length** • Estimate the length of objects in centimeters and meters. • Discuss meter measurement. • Understand the relationship between centimeters and meters. • Determine whether to use centimeters or meters to measure length.	• Estimate • Meter • Centimeter
Lesson 7	**Create line plot for centimeter measurement** • Measure the length of objects in centimeters. • Use measurement data to create a class line plot.	• Line • Meter • Centimeter
Lesson 8	**Measuring length in millimeter (mm)** • Demonstrate understanding that centimeters are composed of millimeters. • Determine whether to use cm or m to measure lengths. • Measure the length of objects in millimeters. • Describe the pattern they observe when measuring the same object in millimeters and centimeters.	• Greater than • Less than • Millimeter
Lessons 9&10	**Create line plot about measurement in (cm) and (mm)** • Use a table to record data and represent the data on the line plot. • Determine whether to use meters, centimeters, or millimeters to measure length. • Create a line plot using collected data of measurements.	• Table • Line plot

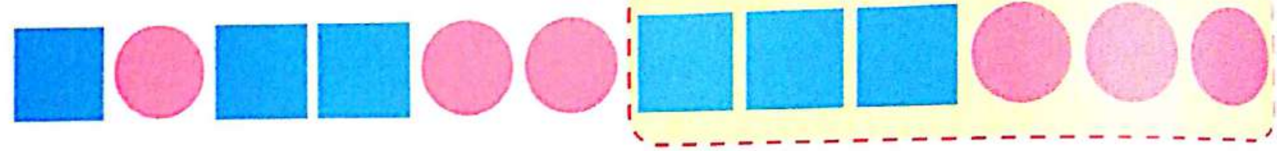


Patterns

Types of patterns

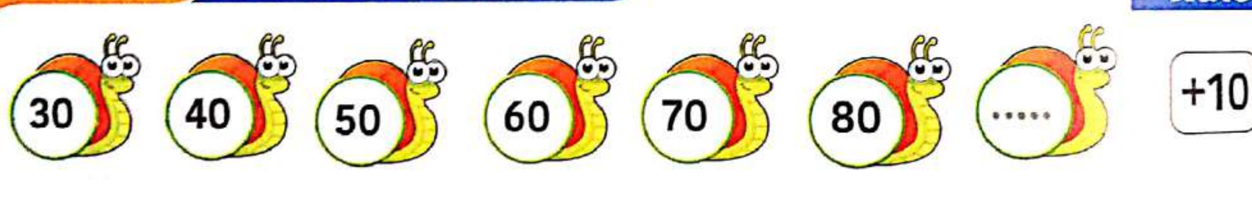
First Visual pattern:





Second Number pattern:

Rule









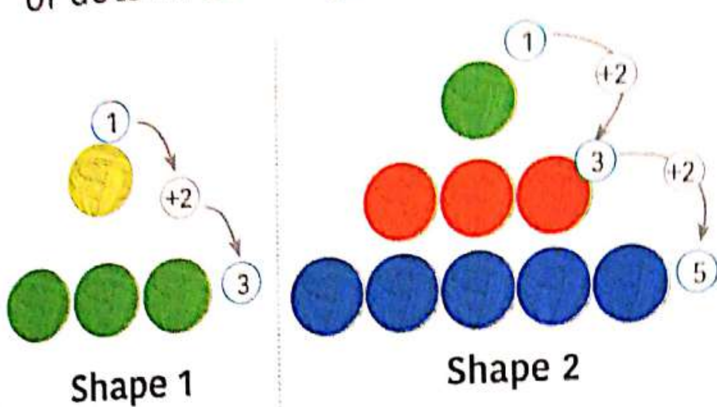


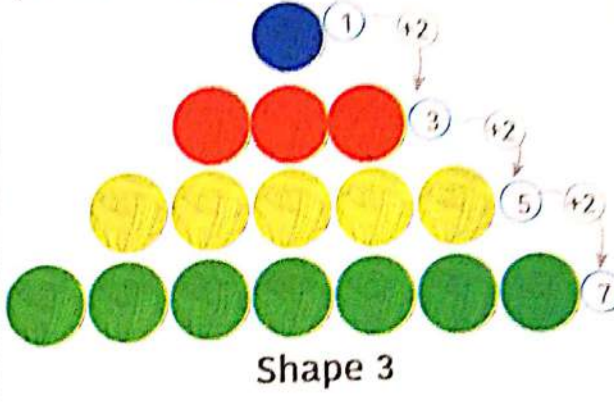
Daily Practice:

- Practice with your child solving some examples on the number pattern and visual patterns.

Third Dot pattern:

It is a type of geometric pattern that depends on counting the number of dots in each figure to determine the pattern rule.



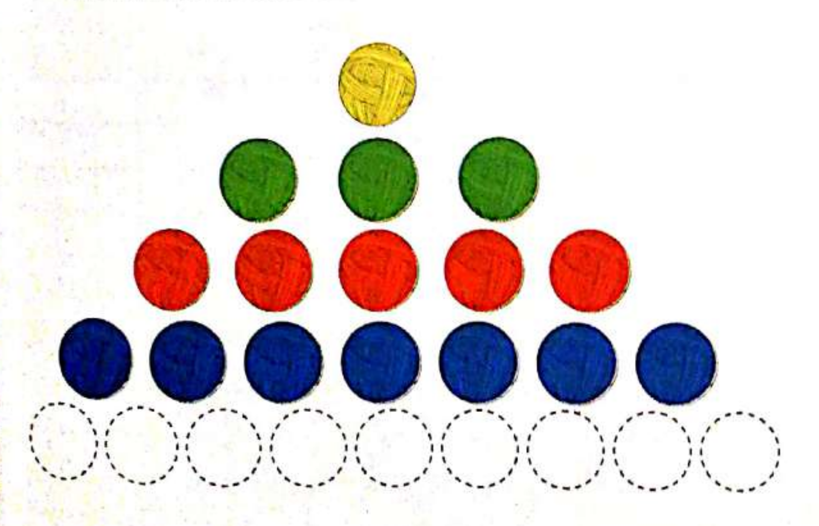


What is the rule of this pattern?

- The pattern rule is adding an extra row and represent it as a triangular sequence by drawing one new row each time.
- When we start counting the balls in each row, we found that:
  The number of balls is increasing by 2 balls more than the previous row.



Draw to complete the pattern of shape 4 and shape 5 for the pattern above:



Shape 4

Shape 5

Parents' Tips:

- Give your child counters to build each image of dots, building it may help him/her see the pattern to build and draw the next two images of dots.





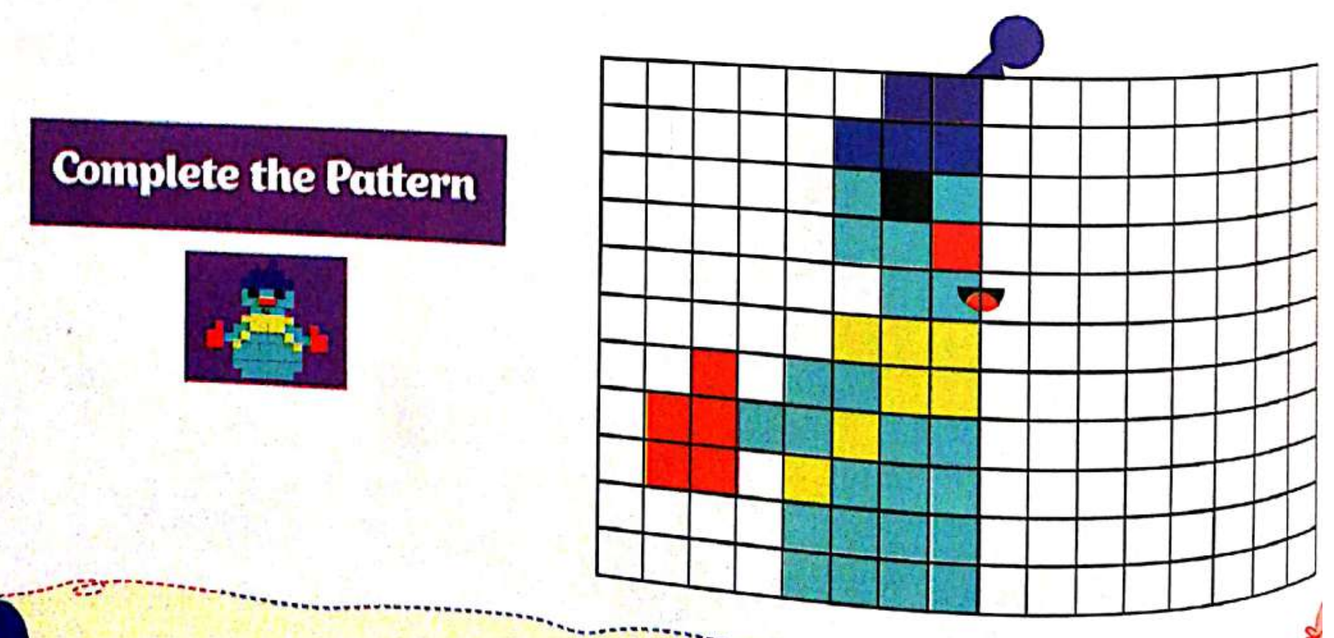
Color to complete the following patterns:

a)

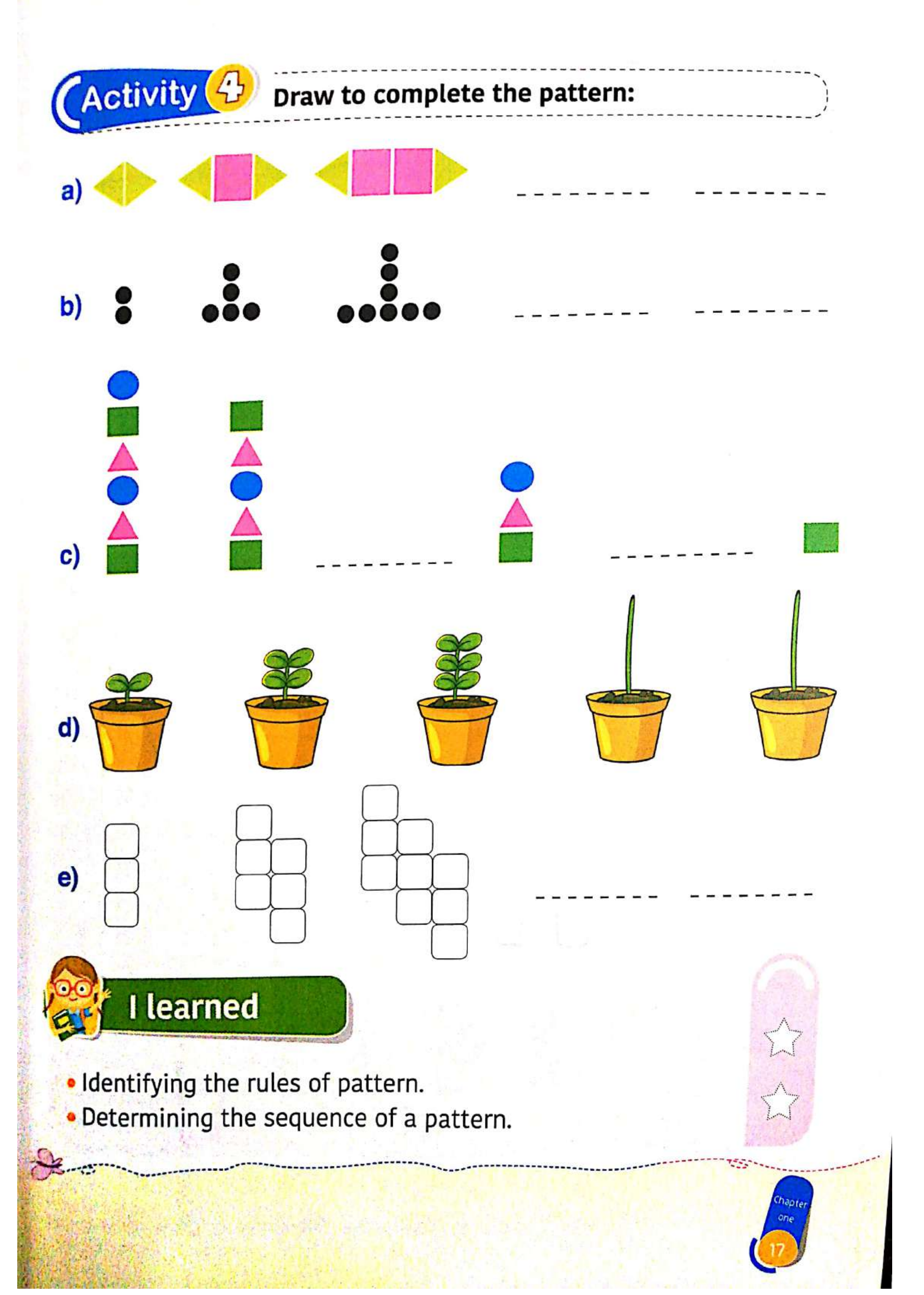
b)



Color to complete the other half of the iceman:



Parents' Tips:
- Practice with your child recognizing visually how to complete patterns.



Activity 4 Draw to complete the pattern:

a)

b)

c)

d)

e)

I learned

- Identifying the rules of pattern.
- Determining the sequence of a pattern.



Bar graph

Karim asked his friends about their favorite pets, then he drew a bar graph to represent this information.

How many students like cats? 12 students

How many students like dogs? 18 students

How many students like rabbits? 8 students

How many students like fish? 9 students

What Karim has collected is called data, let's represent them on a bar graph:

Vertical axis goes up and down

Favorite pet

Title helps us learn about what data show

Number of students

18
16
14
12
10
8
6
4
2
0

Scale helps us read the data accurately

Pets

Horizontal axis goes left to right

Daily Practice:

- Practice with your child drawing a bar graph with a scale of 2 and try to remember together the parts of bar graph.

Tally Marks:

- It is a way used to record the data.
- The tally marks represent the number up to 4 as (1 / , 2 // , 3 /// , 4 ////), then a group of 5 as 卌 so it will be easy to be counted.

We can record the data on a chart using tally marks to represent the favorite sport for some children:

Favorite Sport		
Swimming	卌 卌 卌	15
Horse riding	卌 ||||	9
Ballet	卌	5
Football	卌 卌 卌 卌	20
Basketball	卌 卌	10



Basketball
10 students



Football
20 students



Ballet
5 students



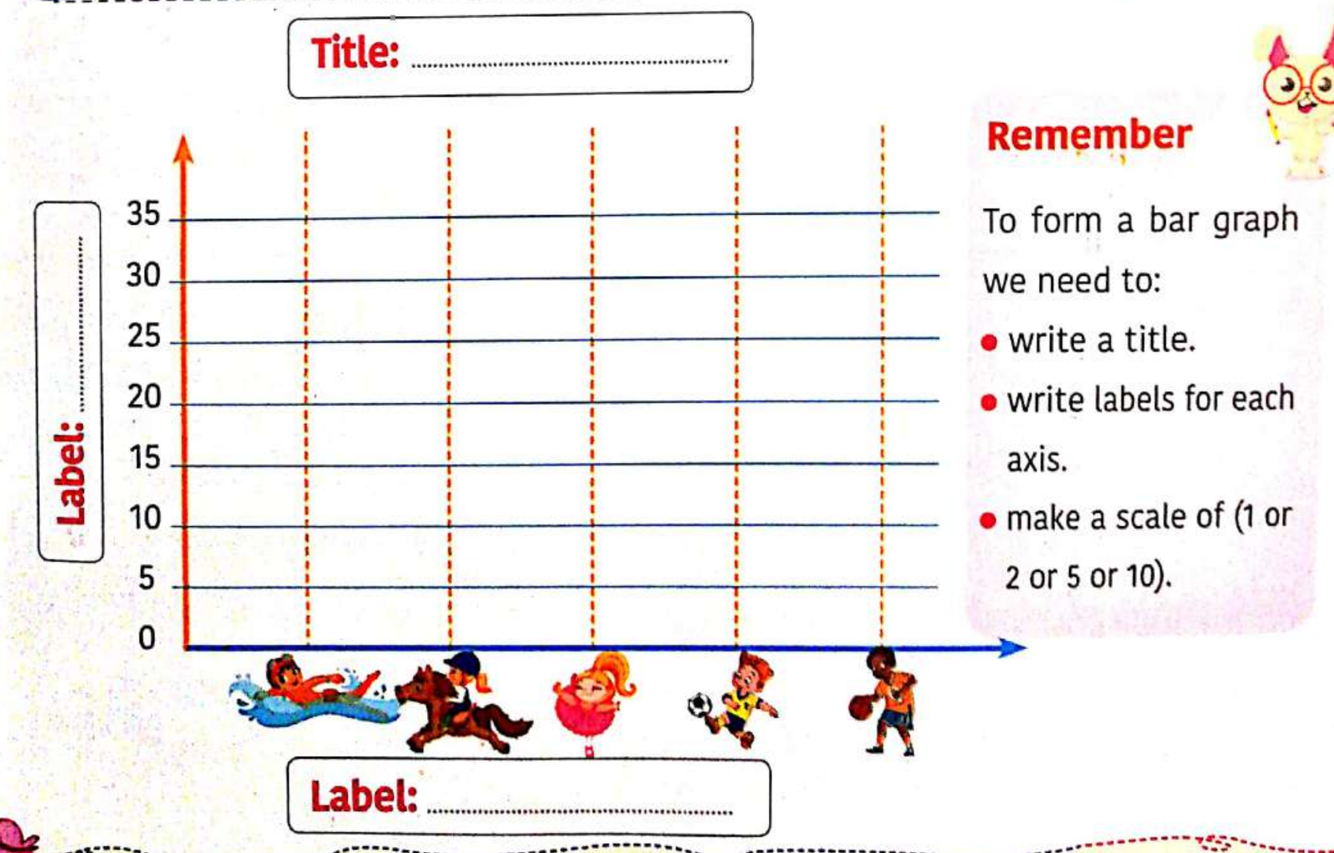
Horse riding
9 students



Swimming
15 students



Color to complete the bar graph:



Remember

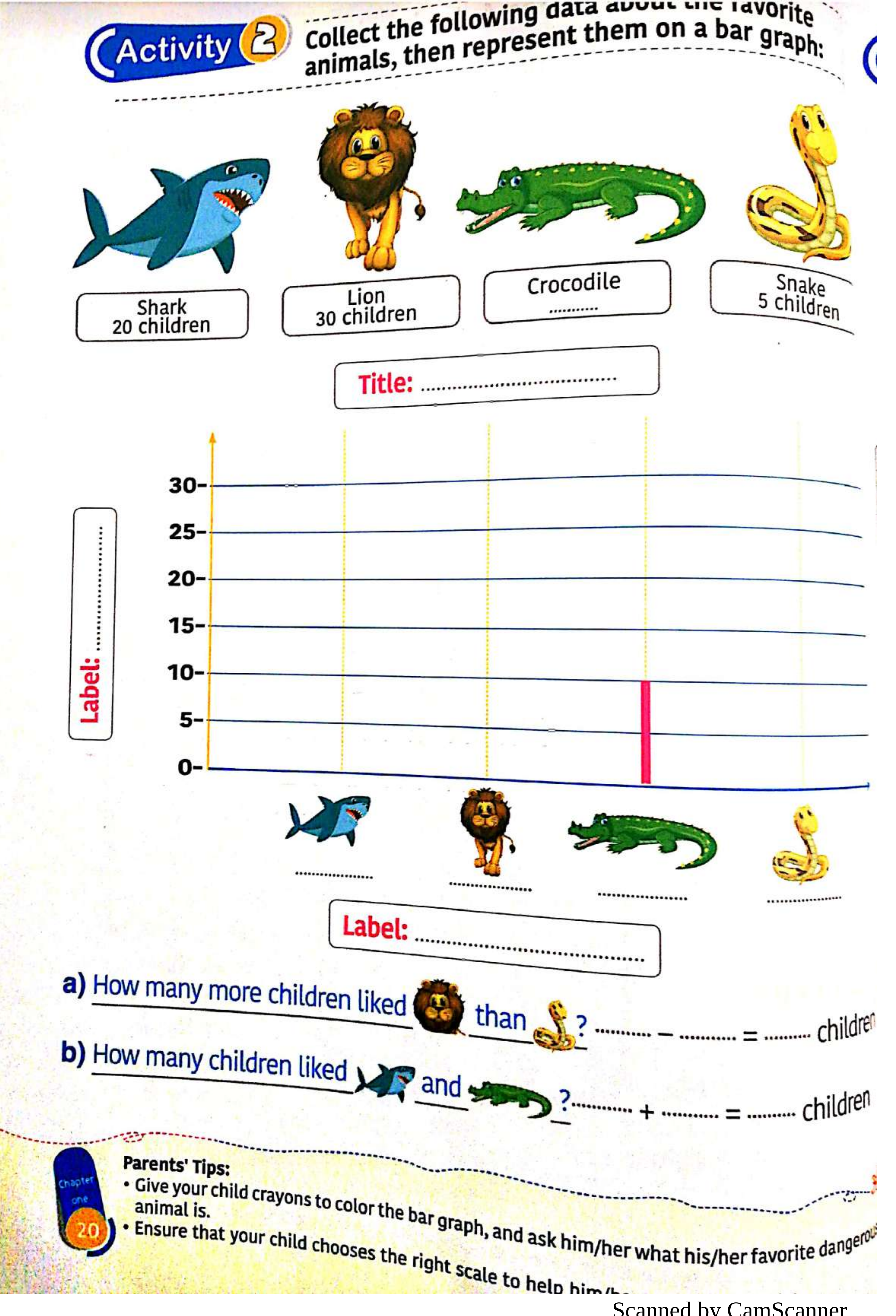
To form a bar graph we need to:

- write a title.
- write labels for each axis.
- make a scale of (1 or 2 or 5 or 10).

Parents' Tips:

- Explain to your child why it is easier to choose using tally marks as a quick way to record his /her data.



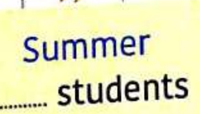


Activity 2
Collect the following data favorite
animals, then represent them on a bar graph:
Shark
20 children
Lion
30 children
Crocodile
....
Snake
5 children
Title: ....
Label: ....
30-
25-
20-
15-
10-
5-
0-
....
....
....
....
Label: ....
a) How many more children liked than ? .... − .... = ... children
b) How many children liked and ? .... + ... = ... children
Parents' Tips:
• Give your child crayons to color the bar graph, and ask him/her what his/her favorite dangerous animal is.
• Ensure that your child chooses the right scale to help him/h...
Chapter one
20



Collect the following data about the favorite season for some students, then represent them on a bar graph:





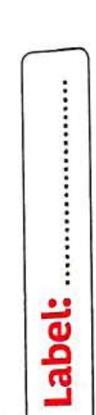


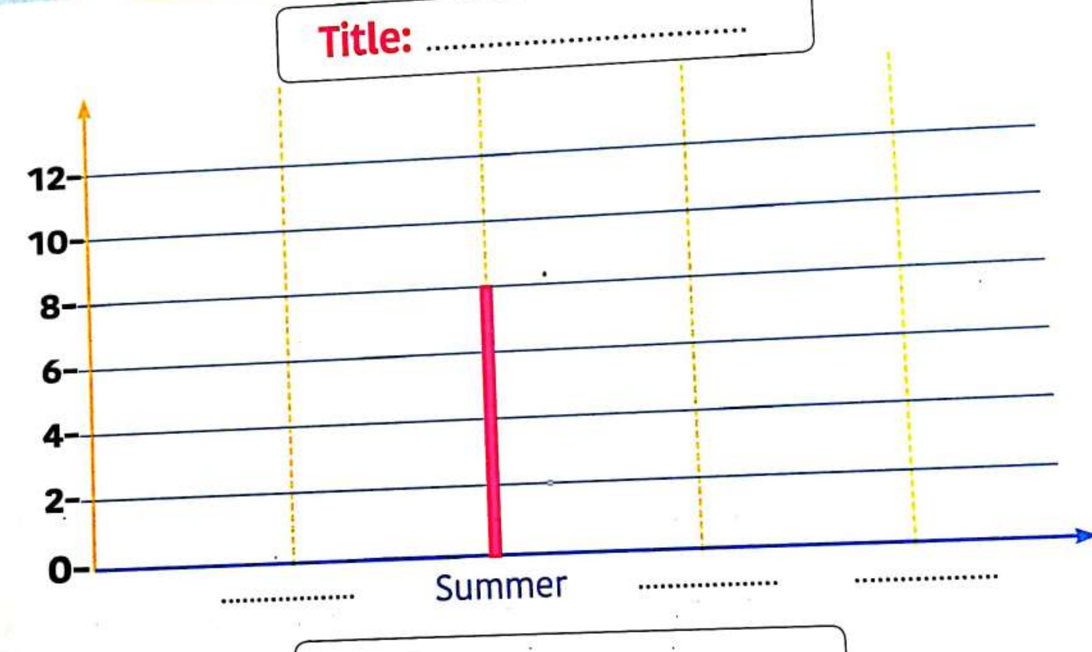
Winter 卌| students

Summer .... students

Spring 卌卌 students

Autumn || students





a) Which scale did you use? ....

b) Which season is liked the most? ....

c) Which season is liked the least? ....



I learned

- Forming a bar graph.
- Organizing and representing data on a bar graph.





Lesson 3 Pictograph

We need to create a pictograph by using data table about the favorite zoo animals for some children:



Elephant
|| children



Monkey
卌 | children

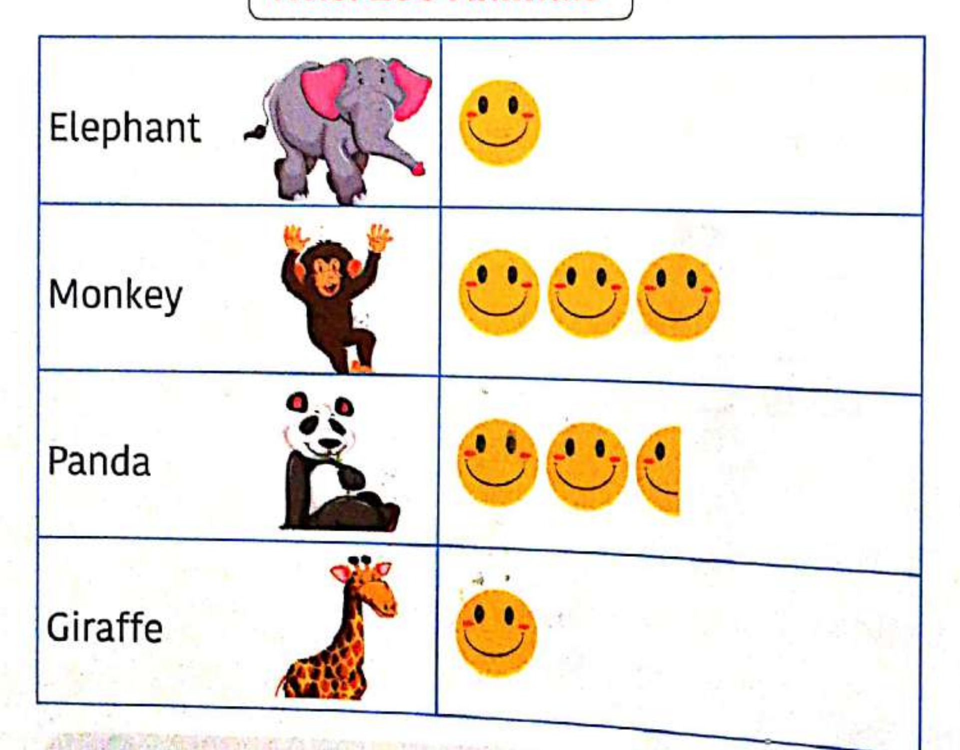


Panda
卌 children



Giraffe
|| children

Title: Zoo Animals



Key: Each 🙂 represents 2 children, each ◖ represents 1 child

a) How many more children liked monkey than giraffe? 6 - 2 = 4

b) How many children liked both elephant and panda? 2 + 5 = 7

Remember

To form a pictograph we need to:

- Write a title.
- Use an image to represent a key.
- Use scale of (1 or 2 or 5 or 10 represented by a key).

Daily Practice:

- Practice with your child asking questions about the last bar graph that helps him/her understand the data and analyze them in an interesting and important way.

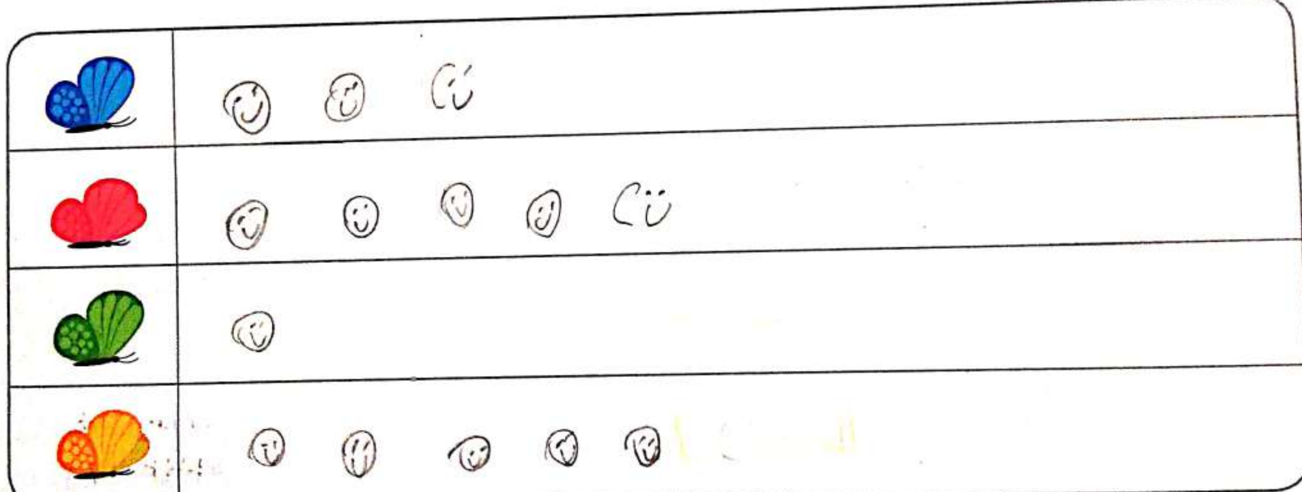




Count the butterflies and tally these data on the chart, then form a pictograph:



Tally Chart	
(blue butterfly)	~~||||~~
(red butterfly)	~~||||~~ ||||
(green butterfly)	||
(orange butterfly)	~~||||~~ ~~||||~~



Key: Each ......☺......... represents 2 butterfly

a) How many (blue butterfly) and (green butterfly) are there in all? ......5 + 2 = 7..........

b) How many (orange butterfly) are there more than (green butterfly) ? ......10 - 2 = 8..........

Parents' Tips:
- Explain to your child that pictographs are used to show large quantities of data.





Activity 2 Form a pictograph about the children's favorite character:





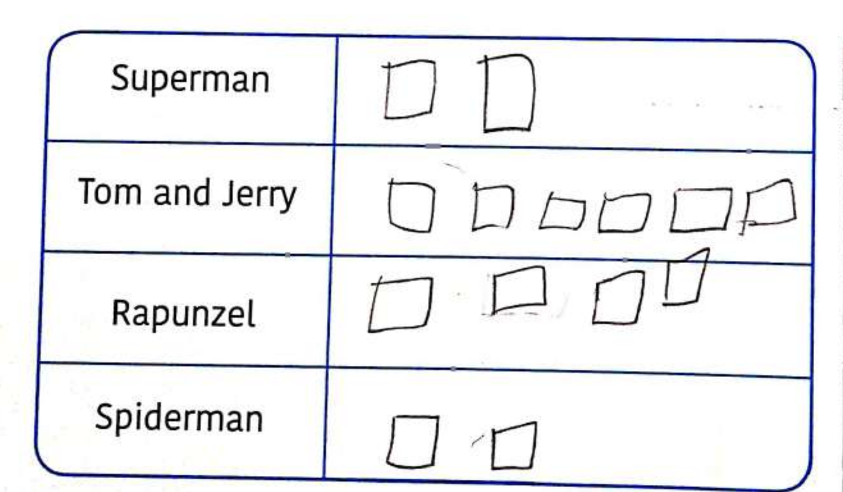






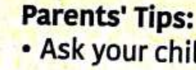


Superman	Tom and Jerry	Rapunzel	Spiderman
10 children	30 children	20 children	10 children



Superman	□ □
Tom and Jerry	□ □ □ □ □ □
Rapunzel	□ □ □ □
Spiderman	□ □

Tally Chart	
Superman	𝍸 𝍸
Tom and Jerry	𝍸 𝍸 𝍸 𝍸
Rapunzel	𝍸 𝍸 𝍸 𝍸
Spiderman	𝍸 𝍸



Key: Each □ represents 5 child.

- Which scale did you use? pictogra

Activ

Prot

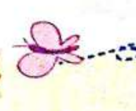
Pr

Veg

Comple

a) The

b) The



Parents' Tips:
- Ask your child to explain his/her process for picking the key and the quantity that each image represents.
- Ask him/her what his/her favorite story is.



Ask 10 of your friends if they eat any of the healthy food shown in the table below, record your data by tally marks, then represent them on a pictograph:

Proteins	Vegetables	Fruits	Carbs
....	....	....	....

Title: ....

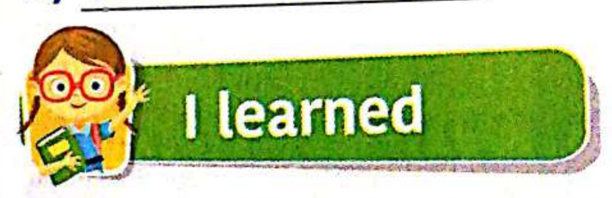
Proteins	
Vegetables	
Fruits	
Carbs	

Key: Each ☺ represents .... friend(s).

Complete:

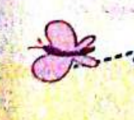
a) The most eaten food is ....

b) The least eaten food is ....



- Forming a pictograph.
- Answering questions about the graphing.



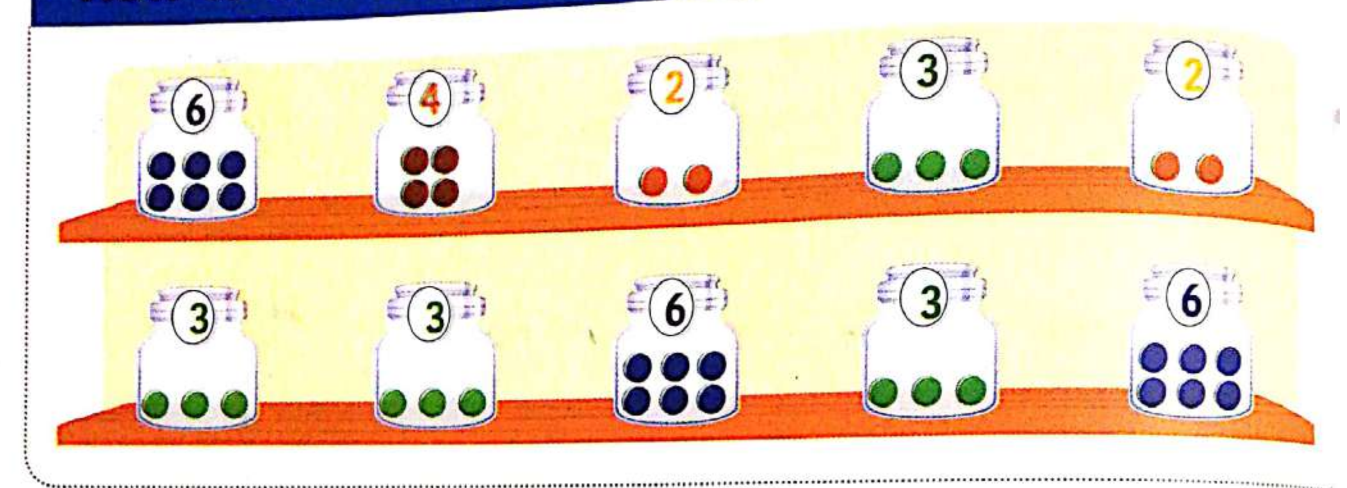






Line plot

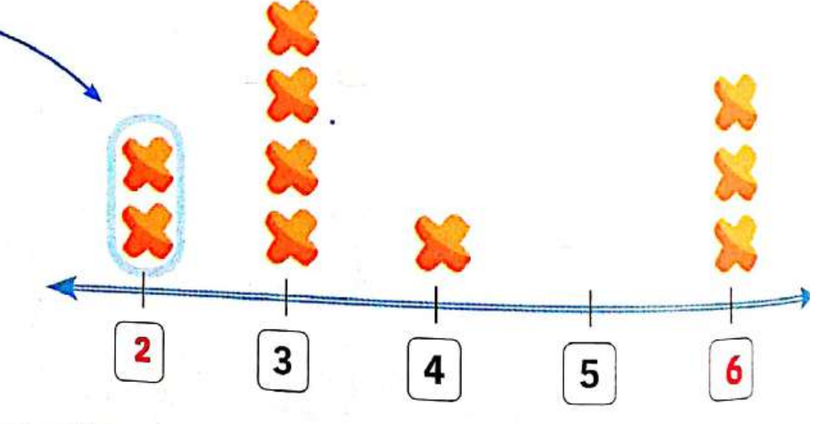
How to create a line plot?



Line plot is a type of graphs used to represent numerical data (number line).

✖'s represent the data of how many jars have **2** candies.

Create the number line starting at **2** (the lowest number of candies) and going up to **6** (the highest number of candies)



Title: Number of Candies

Key ✖ represents the number of jars of the candy.

a) What is the frequency of 3 in our data? 4 **jars**

b) What is the frequency of 6 in our data? 3 **jars**

Frequency means how many times the value is repeated.

Daily Practice:

- Practice with your child finding a quick way to show how many candies in the jars above and hear his/her ideas about collecting this numerical data.



Form a line plot to represent the data about the number of mangoes in the boxes in a store:

20 25 20 21 23

24 23 21 23

20 21 ....

Title: ....

Remember
- The number line can start with any number and can go on forever.

Key ✖ represents the number of boxes.

a) What is the frequency of 23 on the line plot? ....mango boxes.

b) What is the frequency of 20 on the line plot? ....mango boxes.

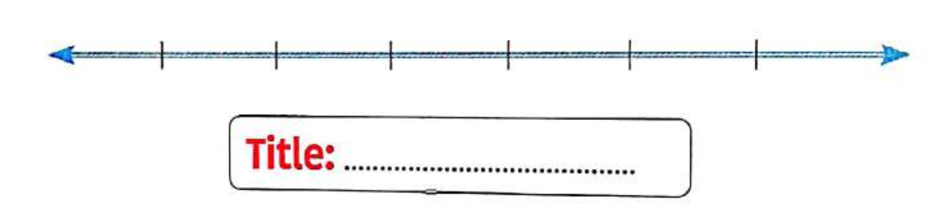
Parents' Tips:
- Ensure that when your child forms a line plot, he /she starts with the smallest number of data and ends up with the biggest number of data.





Form a line plot to represent the data about the number of sold ice cream cones with different flavors during three days:

	Strawberry	Chocolate	Vanilla	Mango
1st day	10	14	12	13
2nd day	15	12	14	15
3rd day	11	14	13	12



Title: ....

Key represents ....

a) What is the frequency of 11 on the line plot? .... ice cream cones.

b) What is the frequency of 14 on the line plot? .... ice cream cones.



I learned

- Identifying elements of a line plot.
- Collecting and recording data.
- Creating a line plot.





Measuring length in centimeter (cm)

Centimeter (cm):

is one of the standard measuring units that help us to measure **short objects.**

Do you know how I can measure the length of my chocolate bar ?

The ruler is the tool used to measure short lengths.

To measure the length of the .

First : Put the lined up with the zero of the ruler.

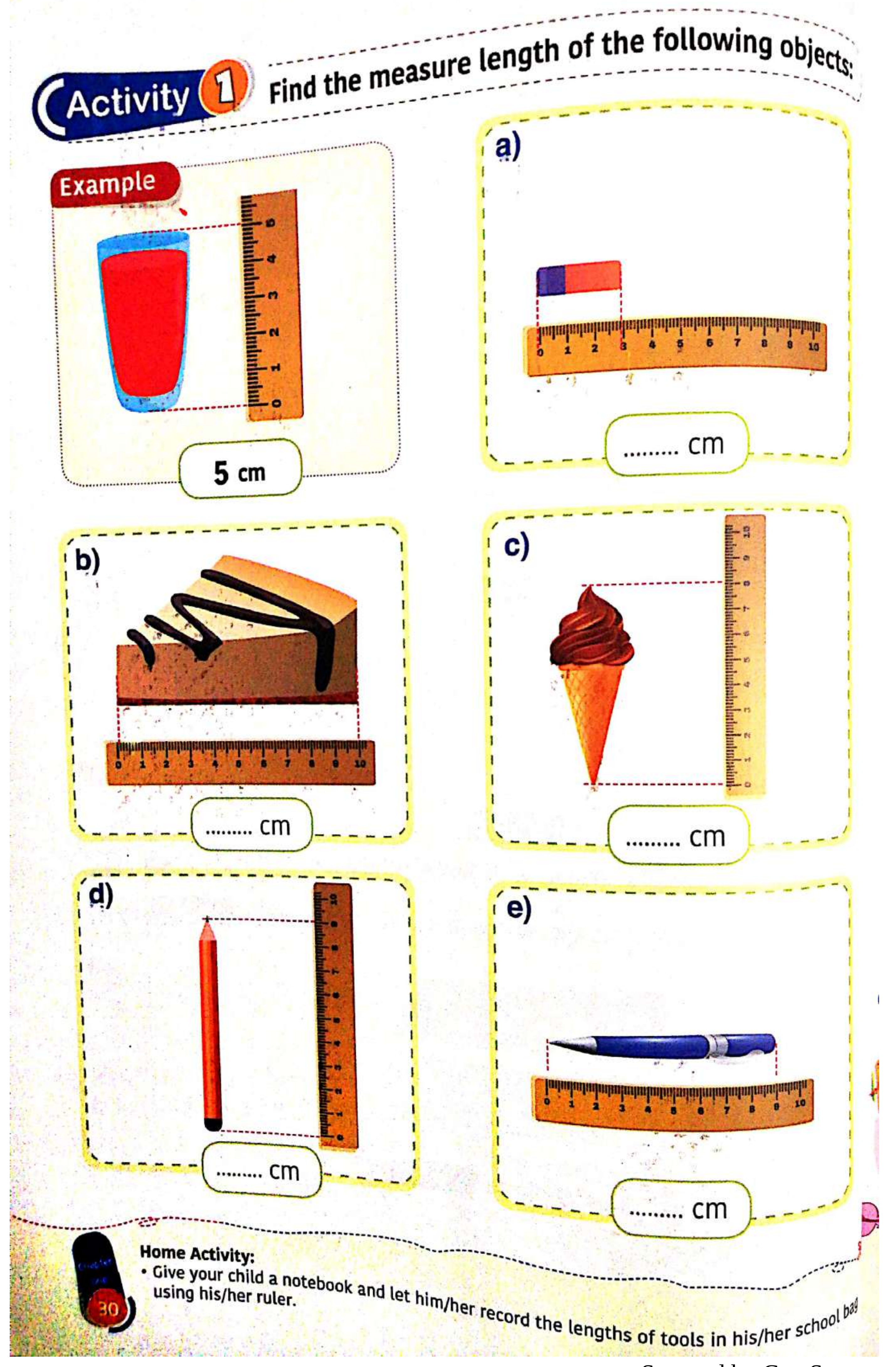
Second : Read the length as the number of cm at the end of the .

0 1 2 3 4 5 6 7 8 9 10

The length of = 7 cm

Home Activity:

• Practice with your child how to analyze errors by giving him/her an example about line plot



Activity 1
Find the measure length of the following objects:
Example
5 cm
a)
.... cm
b)
.... cm
c)
.... cm
d)
.... cm
e)
.... cm
Home Activity:
• Give your child a notebook and let him/her record the lengths of tools in his/her school bag using his/her ruler.
30



Activity 2

Measure the length of each object, then find the longest and the shortest:

a) ______ cm

b) ______ cm

c) ______ cm

d) ______ cm

e) The longest length = ... cm

f) The shortest length = ... cm

Activity 3

Measure the length, then order them from the shortest to the longest:

a) ______ cm

b) ______ cm

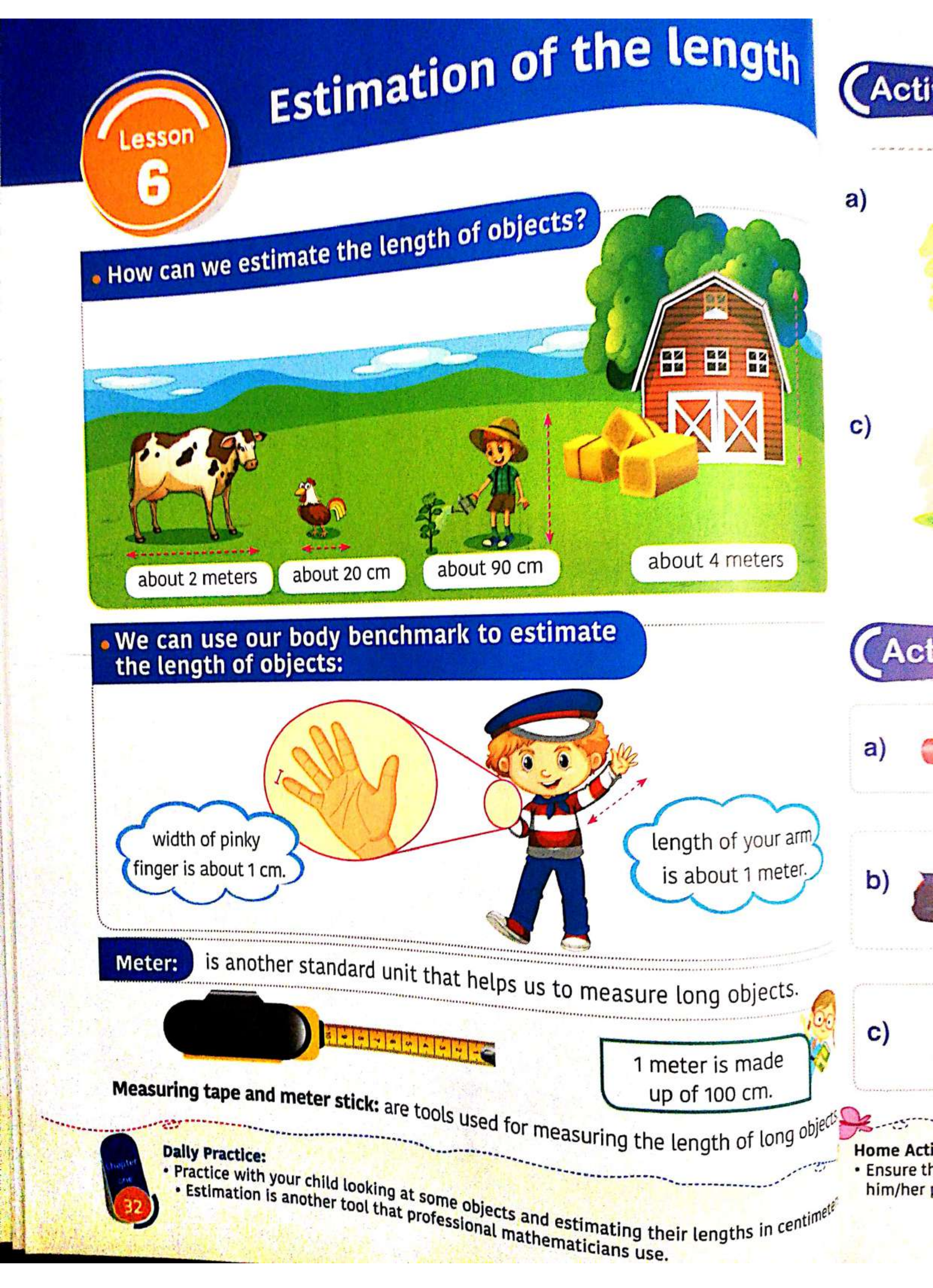
c) ______ cm

d) ______ cm

e) **The order is :** .... , ... , ... and ....

I learned

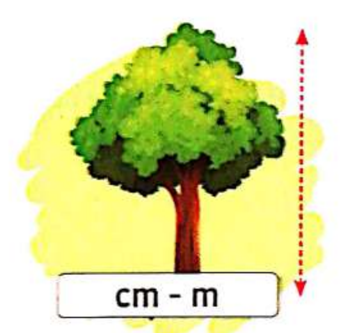
- Measuring the length of objects in centimeter (cm).


Lesson 6
Estimation of the length
How can we estimate the length of objects?
about 2 meters
about 20 cm
about 90 cm
about 4 meters
We can use our body benchmark to estimate the length of objects:
width of pinky finger is about 1 cm.
length of your arm is about 1 meter.
Meter: is another standard unit that helps us to measure long objects.
1 meter is made up of 100 cm.
Measuring tape and meter stick: are tools used for measuring the length of long objects.
Daily Practice:
• Practice with your child looking at some objects and estimating their lengths in centimeters.
• Estimation is another tool that professional mathematicians use.
32
Acti
a)
c)
Act
a)
b)
c)
Home Acti
• Ensure th
him/her

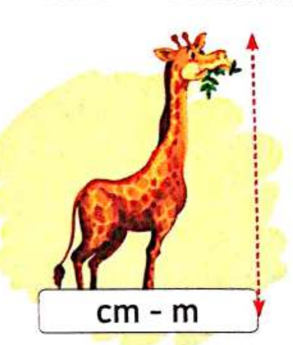


Choose the suitable unit for measuring the following objects:

a)



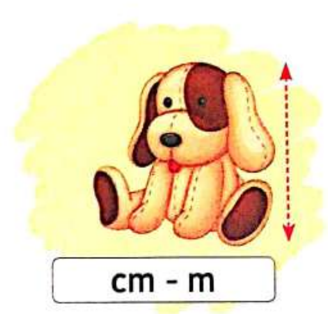
b)



c)



d)





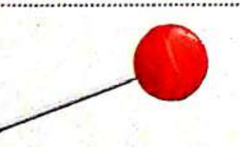
Estimate the length of the following objects:

a) 

My estimated length is about .... cm

b)

My estimated length is about .... m

c) 

My estimated length is about .... cm

Home Activity:

- Ensure that your child notices the difference between the two units (cm) and (m) by showing him/her pictures of objects that could be measured in centimeters or meters.



Activity 3 Match:

a)

b)

c)

d)

1) • about 10 cm

2) • about 2 m

3) • about 10 m

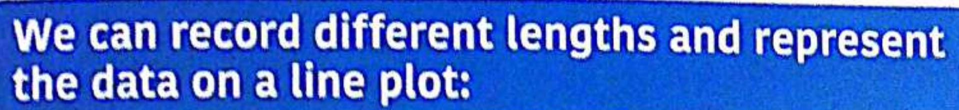
4) • about 50 cm



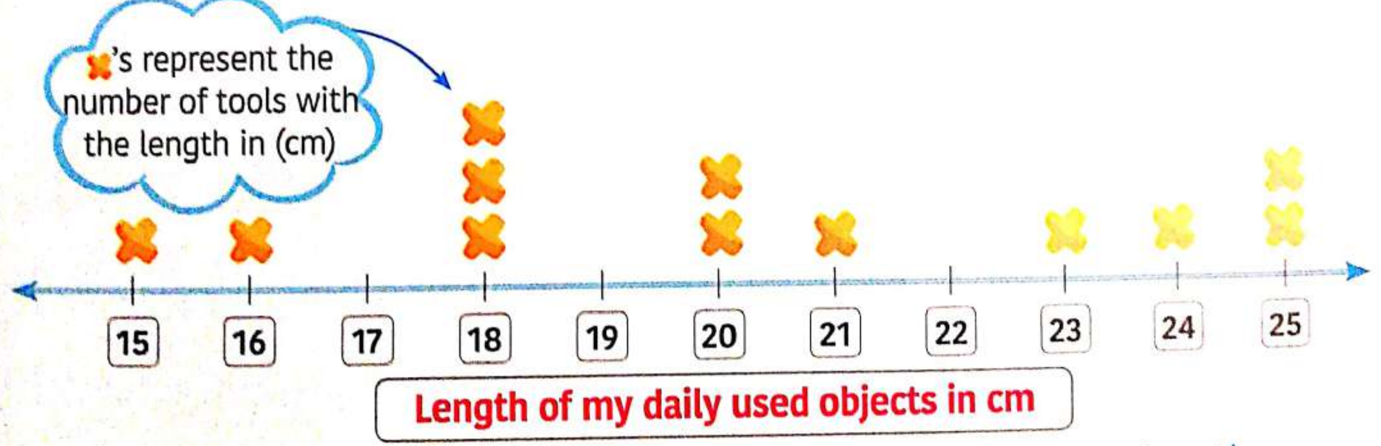
- Estimating the length in (cm) and in (m).
- Discussing meter measurement.
- Determining whether to use centimeters or meters.



Create line plot for centimeter measurement







a) What is the frequency of the longest length you have recorded on the line plot? **25 cm** recorded 2 times.

b) What is the frequency of the shortest length you have recorded on the line plot? **15 cm** recorded 2 times.

Daily Practice:

- Practice with your child measuring different objects around him/her in both centimeters or meters.

Activity 1 Use the following lengths to form a line plot:

40 cm





46 cm

48 cm

Title: ....

Key ✖ represents ....

a) What is the frequency of the longest hair length you have recorded? ....

b) What is the frequency of the shortest hair length you have recorded? ....

Activi

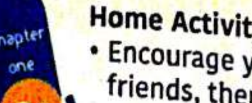
Key ✖ re

a) What i

b) What



• Usin



Home Activity:

• Encourage your child to measure the length of his/her lunch box and three more of his/her friends, then form a line plot to represent these measurements.



Use the following lengths of toys to form a line plot:


5 cm


9 cm


9 cm


11 cm


9 cm


7 cm


10 cm

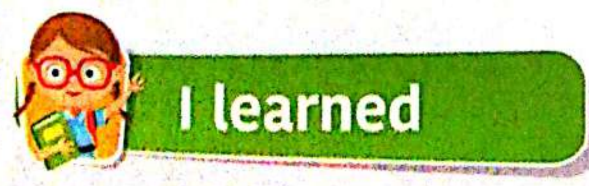

5 cm

Title: ....

Key ✖ represents ....

a) What is the frequency of the smallest length you have recorded? ....

b) What is the frequency of the biggest length you have recorded? ....



- Using the measurement data in (cm) to create a line plot.



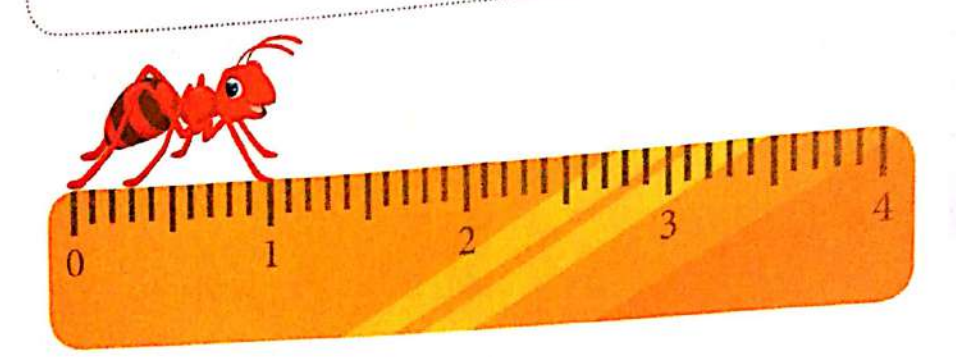




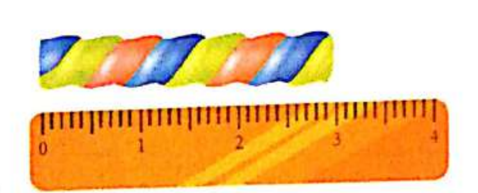
Measuring length in millimeter (mm)

Millimeter:

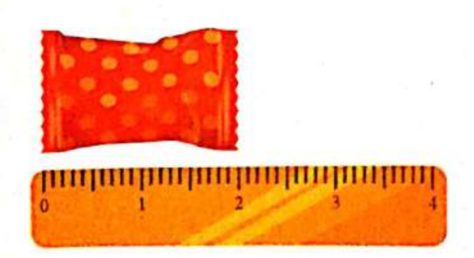
is a standard measurning unit that helps us to measure tiny (very small) objects.



Notes:
Millimeter is smaller than centimeter.
It is the length between two small dashes on the ruler.



The length in (cm)	The length in (mm)
3 cm	30 mm



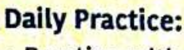
The length in (cm)	The length in (mm)
2 cm	20 mm

We notice that:

3 cm = 30 mm

2 cm = 20 mm

That means each 1 cm consists of 10 mm (1 cm = 10 mm).



Daily Practice:

- Practice with your child giving several pictures of objects and ask him/her if it should be measured in centimeters or millimeters.

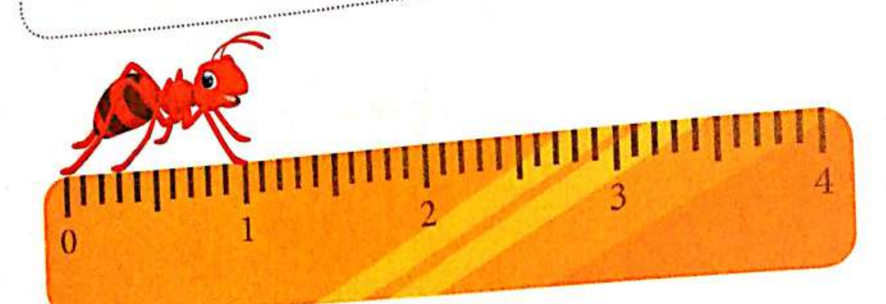
Measuring length in millimeter (mm)

Lesson 8

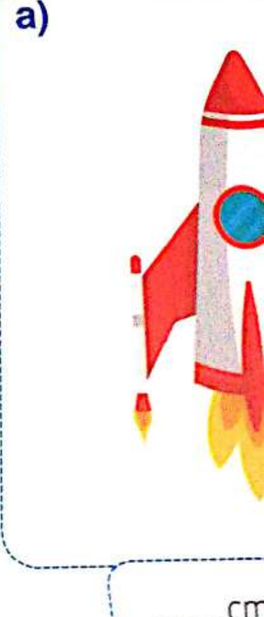


Millimeter:

is a standard measurning unit that helps us to measure tiny (very small) objects.

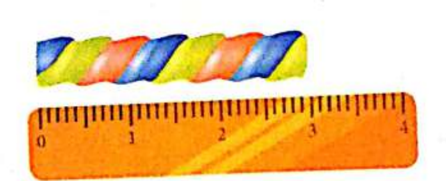


Notes:
Millimeter is smaller than centimeter.
It is the length between two small dashes on the ruler.

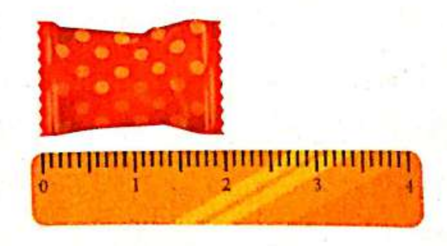


a)

...... cm

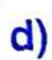


The length in (cm)	The length in (mm)
3 cm	30 mm



The length in (cm)	The length in (mm)
2 cm	20 mm

c)



d)

We notice that:

3 cm = 30 mm

2 cm = 20 mm

That means each 1 cm consists of 10 mm (1 cm = 10 mm).

Daily Practice:

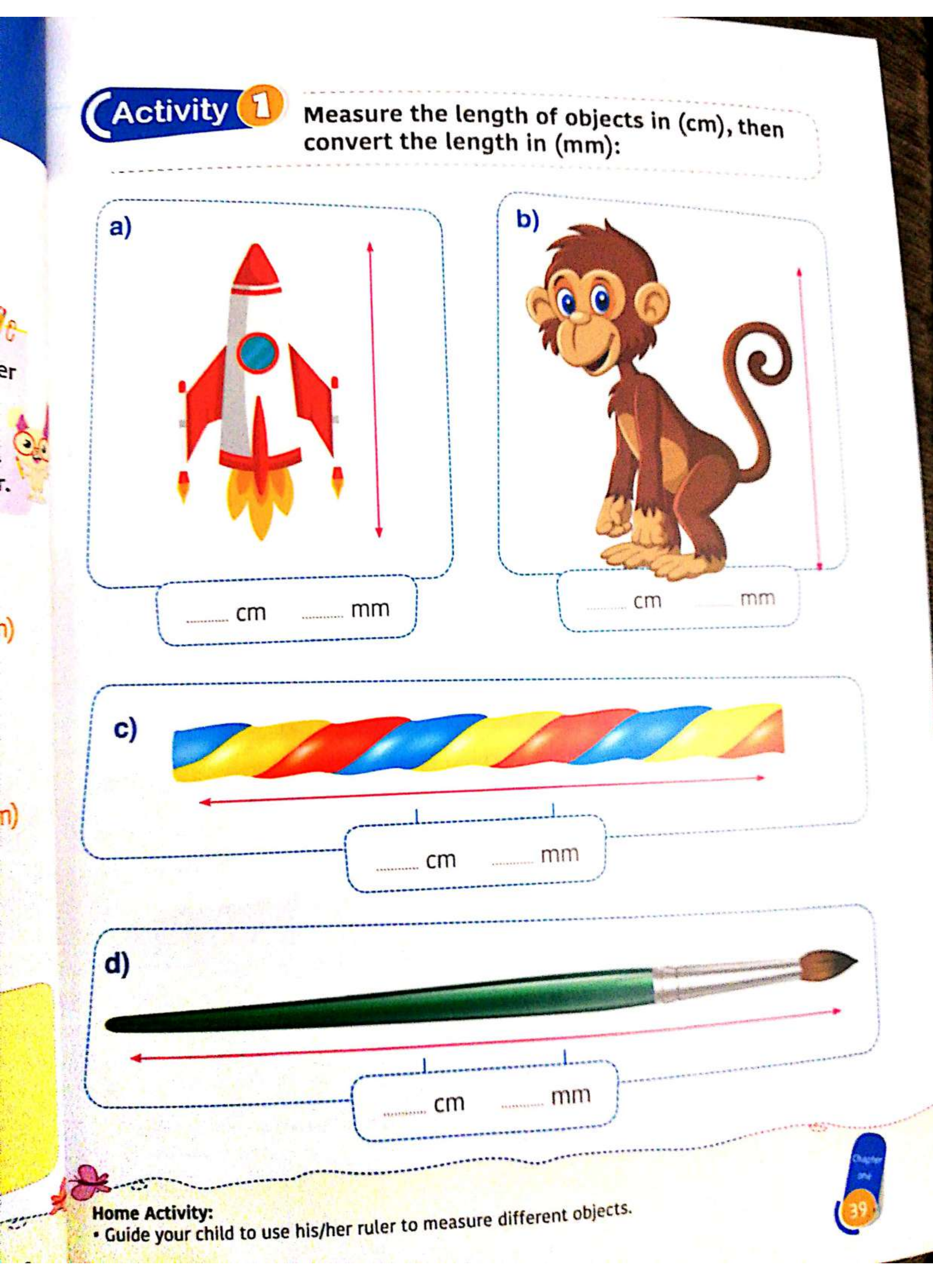
- Practice with your child giving several pictures of objects and ask him/her if it should be measured in centimeters or millimeters.

Home Activity:

- Guide your child t

Activity 1

Measure the length of objects in (cm), then convert the length in (mm):



Home Activity:

• Guide your child to use his/her ruler to measure different objects.

Scanned by CamScanner



Activity 2 Measure the length, then choose the correct answer:

a)

20 mm | 3 cm | 4 cm

b)

2 cm | 4 cm | 60 mm

c)

4 cm | 5 cm | 60 mm

d)

20 mm | 50 mm | 3 cm

e)

7 cm | 80 mm | 5 cm

f)

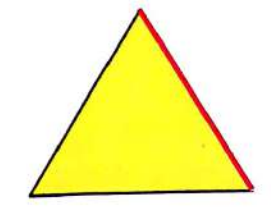
2 cm | 4 cm | 60 mm

Parents' Tips:

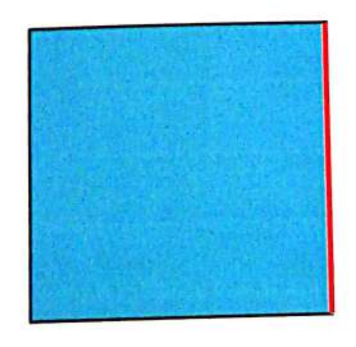
- Ensure that your child can read the measurements of (cm) as a (mm) just start counting by tens.



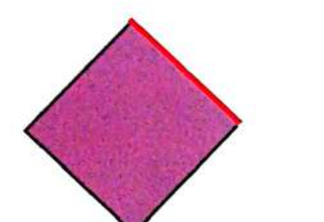
Measure the colored side, then match:

a) 

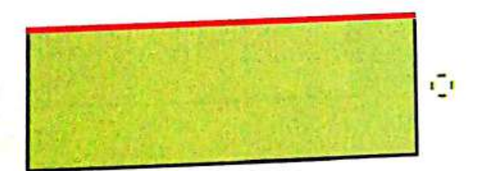
1) 

b) 

2) 

c) 

3) 

d) 

4) 



I learned

- Learning that 1 centimeter consists of 10 millimeters.
- Measuring the length of objects in millimeters.



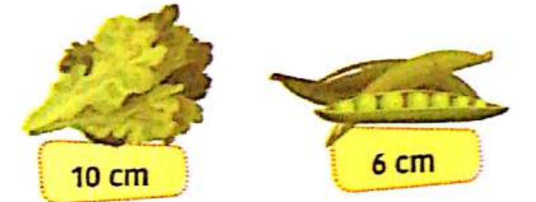


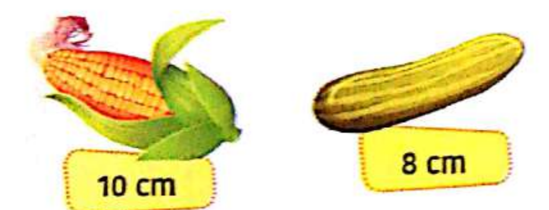
Create line plot using measurement in (cm) and (mm)

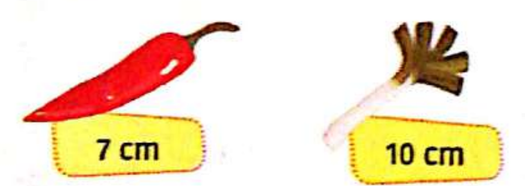
We can create line plots using two types of measurement:

7 cm

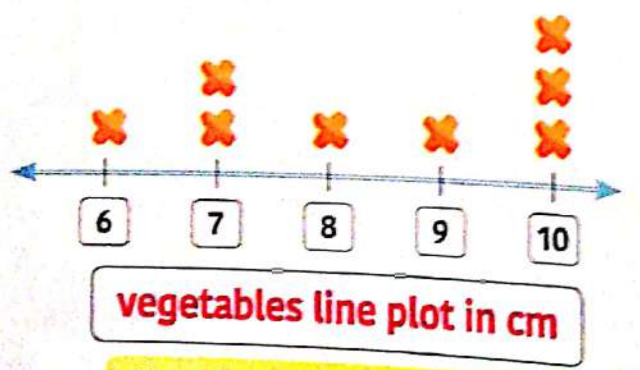
9 cm





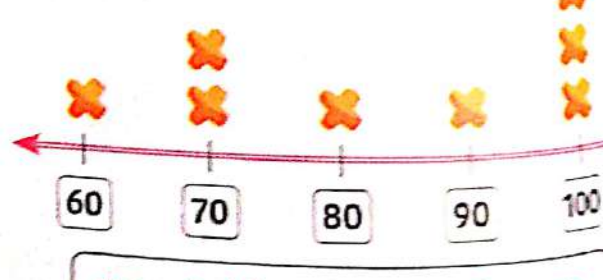


Object	In cm	In mm
	9	90
	7	70
	10	100
	8	80
	10	100
	7	70
	6	60
	10	100



vegetables line plot in cm

Key ✖ represents number of objects in cm.



vegetables line plot in mm

Key ✖ represents number of objects in mm.

Daily Practice:

- Practice with your child asking him/her where this information can be found on the graph. What of measurement was used and how can he/she form line plot?



Record the lengths in mm, then form the two line plots:

9 cm

7 cm

4 cm

8 cm

9 cm

7 cm

5 cm

COLOR PENCILS

4 cm

9 cm

Object	In cm	In mm
	9	....
	7	....
	4	....
	8	....
	9	....
	7	....
	9	....
	5	....
	4	....

Title: ....

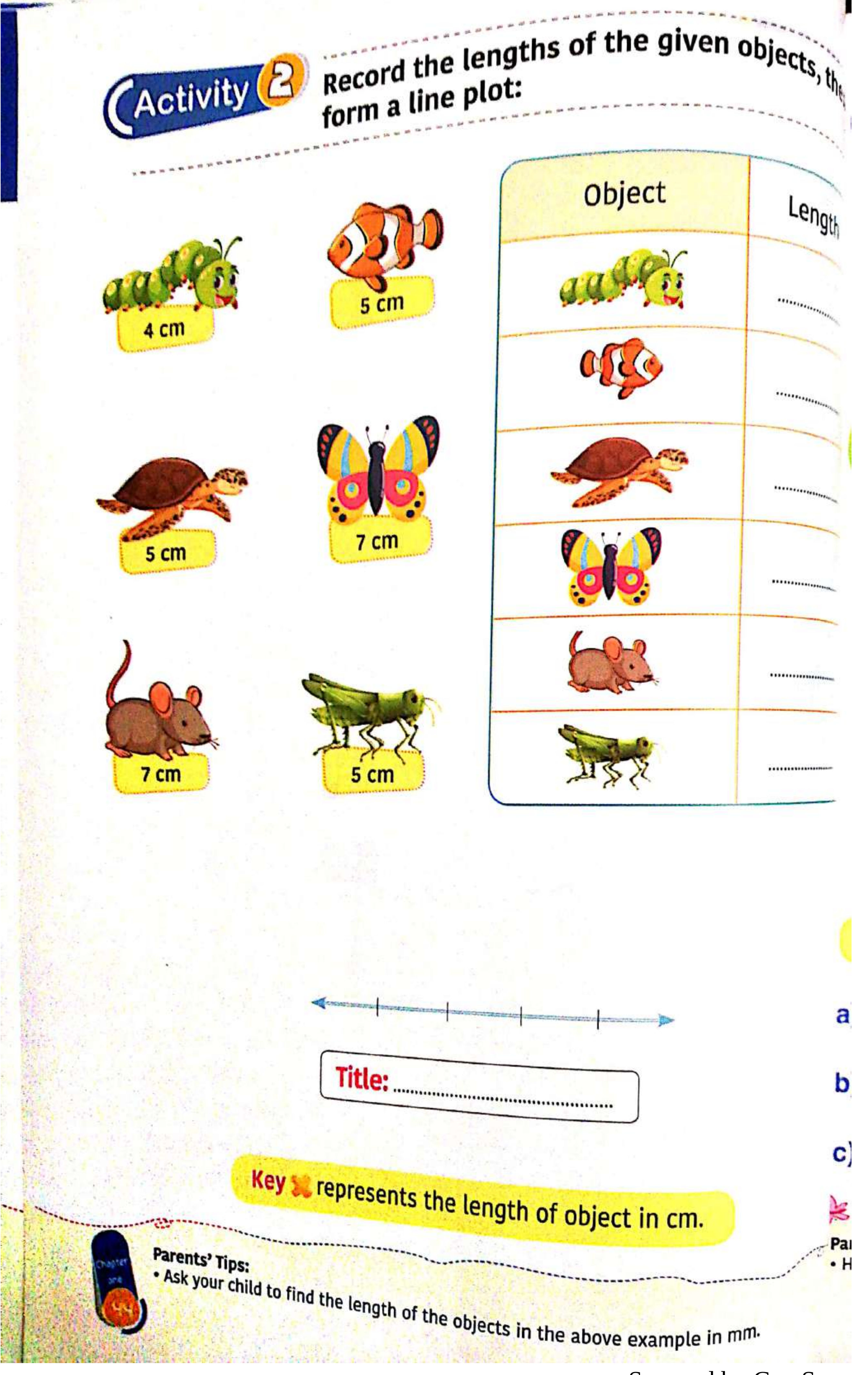
Title: ....

Key ✖ represents number of objects in cm.

Key ✖ represents number of objects in mm.

Parents' Tips:

- Help your child record the length of each object and label the measurement to form the line plot.



Activity 2
Record the lengths of the given objects, the
form a line plot:
4 cm
5 cm
5 cm
7 cm
7 cm
5 cm
Object
Length
Title:
Key represents the length of object in cm.
a
b
c
Parents' Tips:
• Ask your child to find the length of the objects in the above example in mm.

Activity 3

Measure the lengths of the sides from (A to H), then record the measurements to form a line plot:

Object	Length
A	....
B	....
C	....
D	....
E	....
F	....
G	....
H	....

Title: ....

Key ✖ represents ....

a) What is the longest length you have recorded? .....cm

b) Write the longest length in both (cm) and (mm)? .....cm , ...mm

c) Write the shortest length in both (cm) and (mm)? .....cm , ...mm

Parents' Tips:

- Help your child form a bar graph to represent the data in the above activity.





Measure each of the following, then represent the data in mm on the line plot:

Length
..................mm
..................mm
..................mm
..................mm
..................mm
..................mm
..................mm
..................mm

Title: ....

Key ✖ represents ....



I learned

- Measuring the length in (mm) and (cm), then representing the data on the line plot.





General Activities on Chapter 1



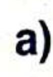
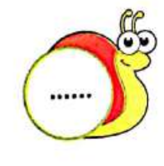
1 Draw to complete the pattern:

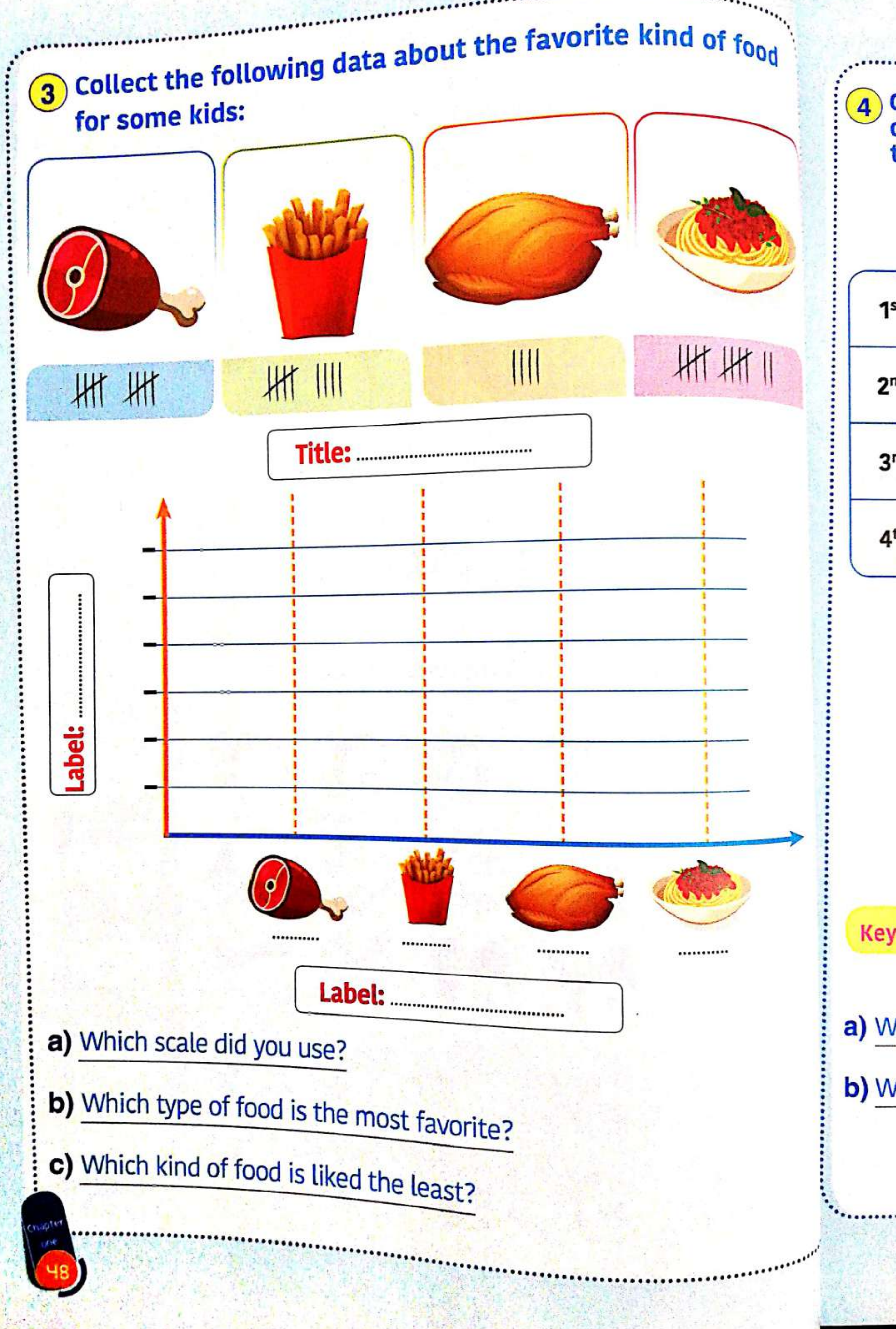
a) ▲●▲ , ▲●●▲ , ▲●●●▲ , __________ , __________

b) □ , ▣ , ▣ , __________ , __________

c) ●●●●● ●●●●● , ●●●● ●●●● , ●●● ●●● , __________ , __________

2 Fill in the blanks to complete the pattern:

						Rule
a)	  2	 5	 8			 ....
b)	 10	 20	 30			....
c)	 1	 7	 13			....
d)	30	 25	 20			 ....
e)	 41	 39	 37			....



3 Collect the following data about the favorite kind of food for some kids:

𝍸 𝍸	𝍸 ||||	||||	𝍸 𝍸 ||

Title: ....

Label: ....

....

Label: ....

a) Which scale did you use?

b) Which type of food is the most favorite?

c) Which kind of food is liked the least?

4 Create a
of pens w
the class

1st day
2nd day
3rd day
4th day

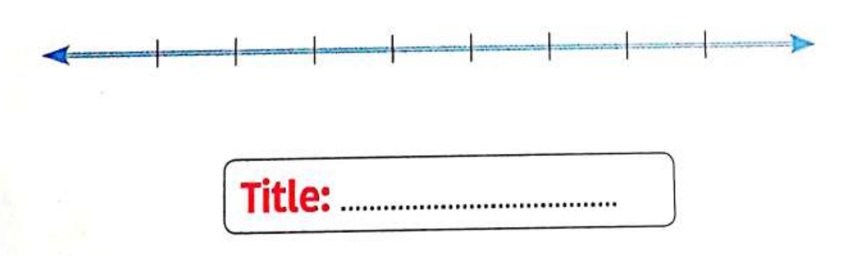
Key represe

a) What is the

b) What is the

4) Create a line plot to represent the data about the number of pens with different colors used by students last week in the class:

	Black	Red	Blue	Green
1st day	2	5	3	1
2nd day	5	1	4	5
3rd day	1	2	5	7
4th day	6	7	3	8



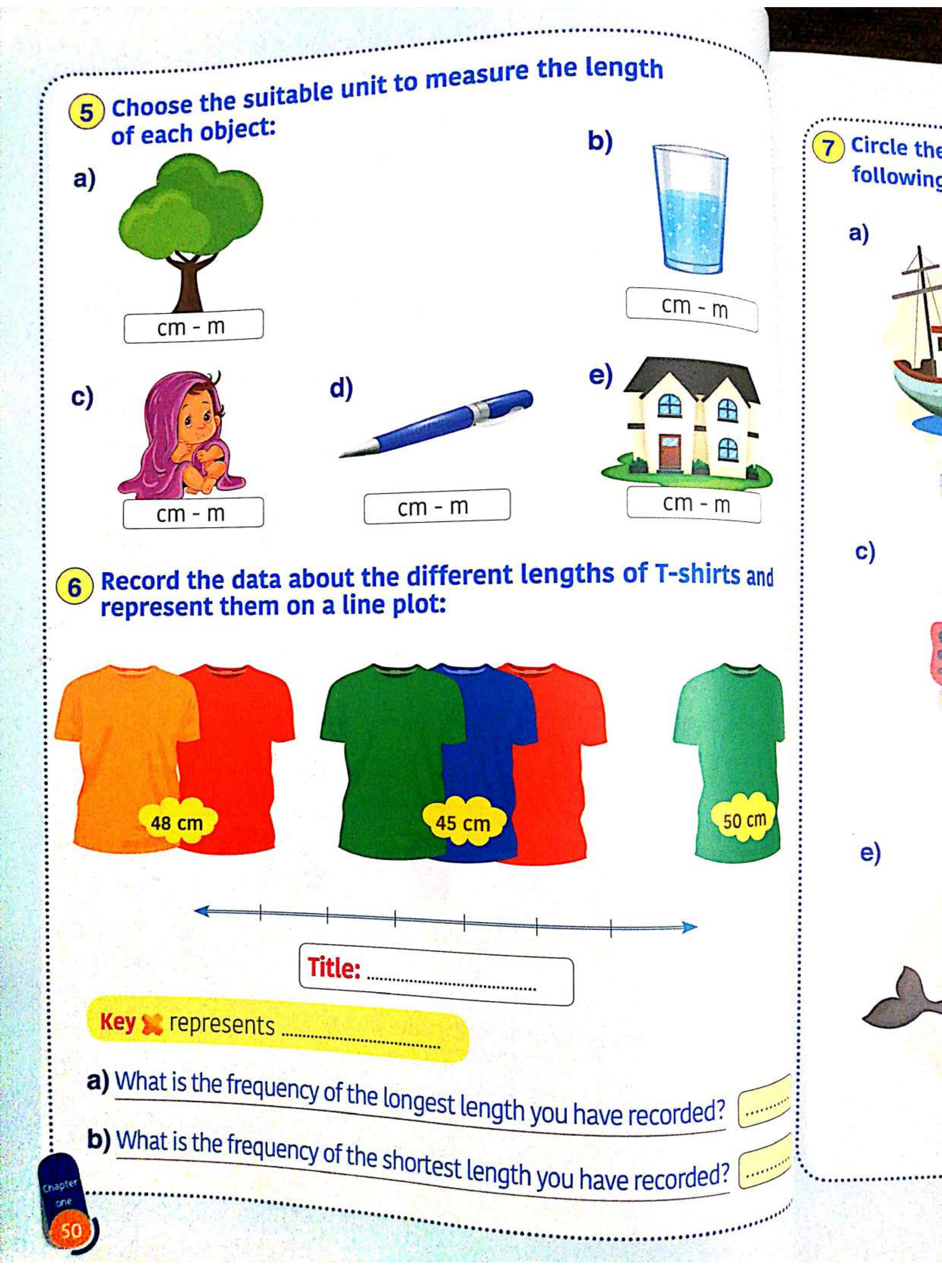
Title: ....

Key ✗ represents ....

a) What is the frequency of 1 on the line plot?

b) What is the frequency of 7 on the line plot?





5 **Choose the suitable unit to measure the length of each object:**

a) cm - m

b) cm - m

c) cm - m

d) cm - m

e) cm - m

6 **Record the data about the different lengths of T-shirts and represent them on a line plot:**

48 cm

45 cm

50 cm

Title: ....

Key ✖ represents ....

a) What is the frequency of the longest length you have recorded? ....

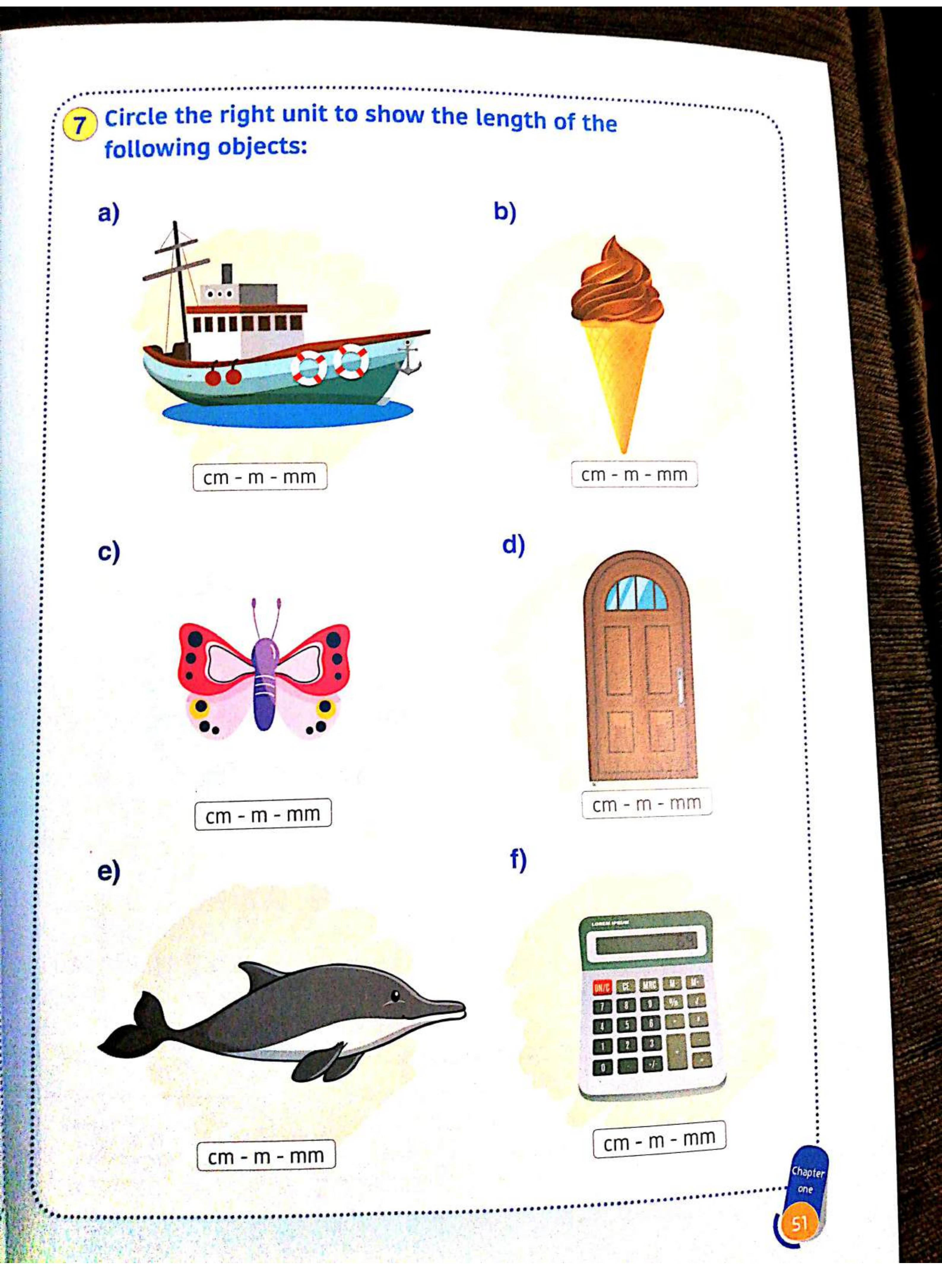
b) What is the frequency of the shortest length you have recorded? ....

7 Circle the following

a)

c)

e)



7 **Circle the right unit to show the length of the following objects:**

a) cm - m - mm

b) cm - m - mm

c) cm - m - mm

d) cm - m - mm

e) cm - m - mm

f) cm - m - mm



8 **Measure each of the following in both (cm) and (mm):**

a) .... cm .... mm

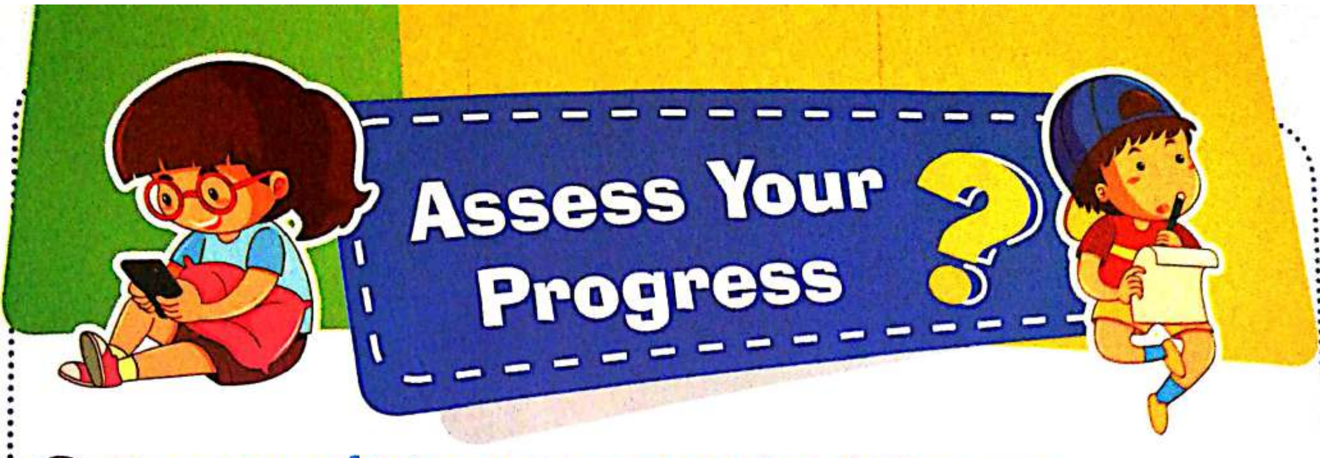
b) .... cm .... mm

c) .... cm .... mm

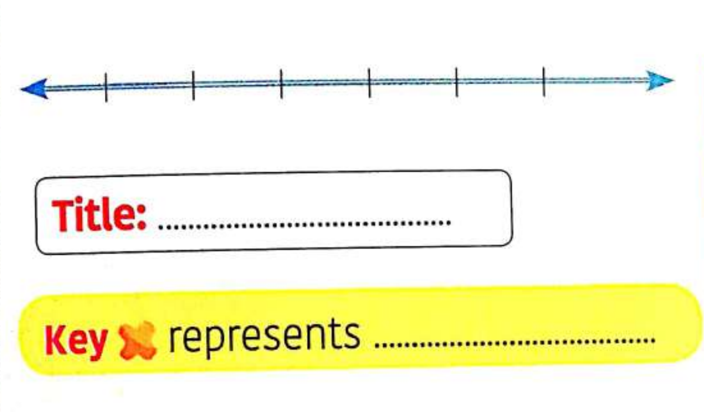
d) .... cm .... mm

e) .... cm .... mm

f) .... cm .... mm



1 The score of 3 teams was recorded during matches, use the data to form a line plot:



Title: ....

Key represents ....

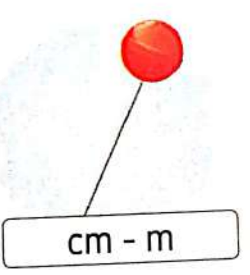
	Blue Team	Red Team	Green Team
Match 1	7	11	11
Match 2	9	8	10
Match 3	11	9	10

- What is the frequency of 11 on the line plot? ....

2 Circle the suitable unit for measuring the following objects:

a) 

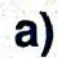
cm - m

b) 

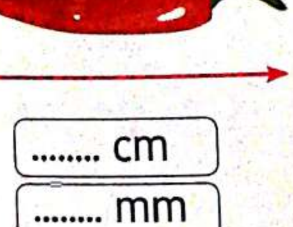
cm - m

c) 

cm - m

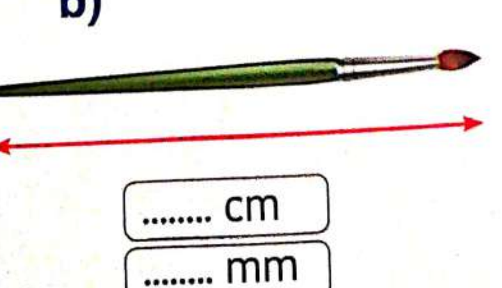


3 Use your ruler to measure the length of each object:

a) 

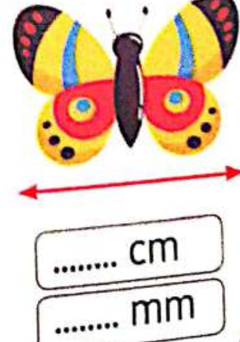
.... cm

.... mm

b) 

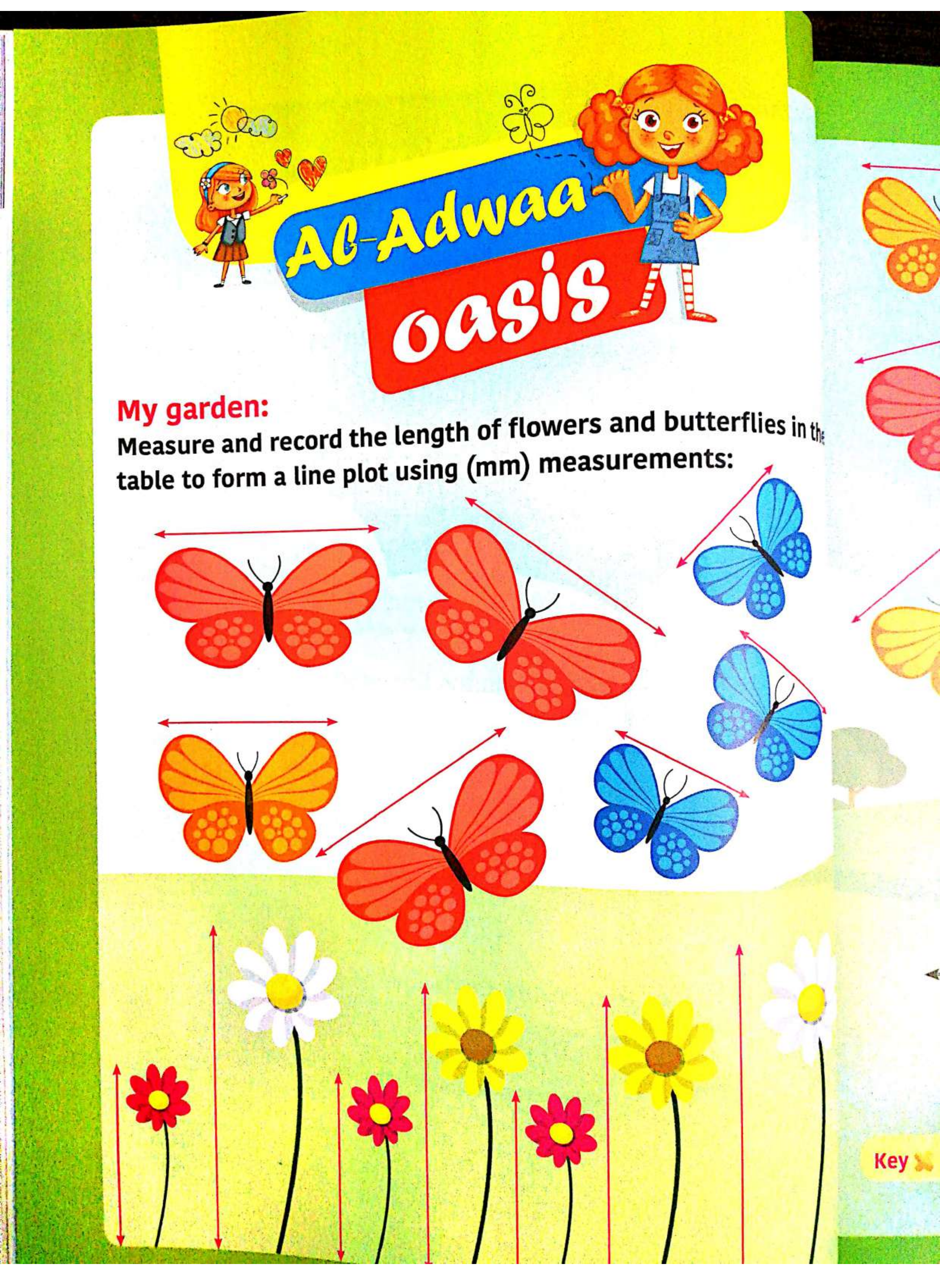
.... cm

.... mm

c) 

.... cm

.... mm


Al-Adwaa
oasis
My garden:
Measure and record the length of flowers and butterflies in the table to form a line plot using (mm) measurements:
Key



Object	In cm	In mm

garden lengths in (mm)

Key represents ....

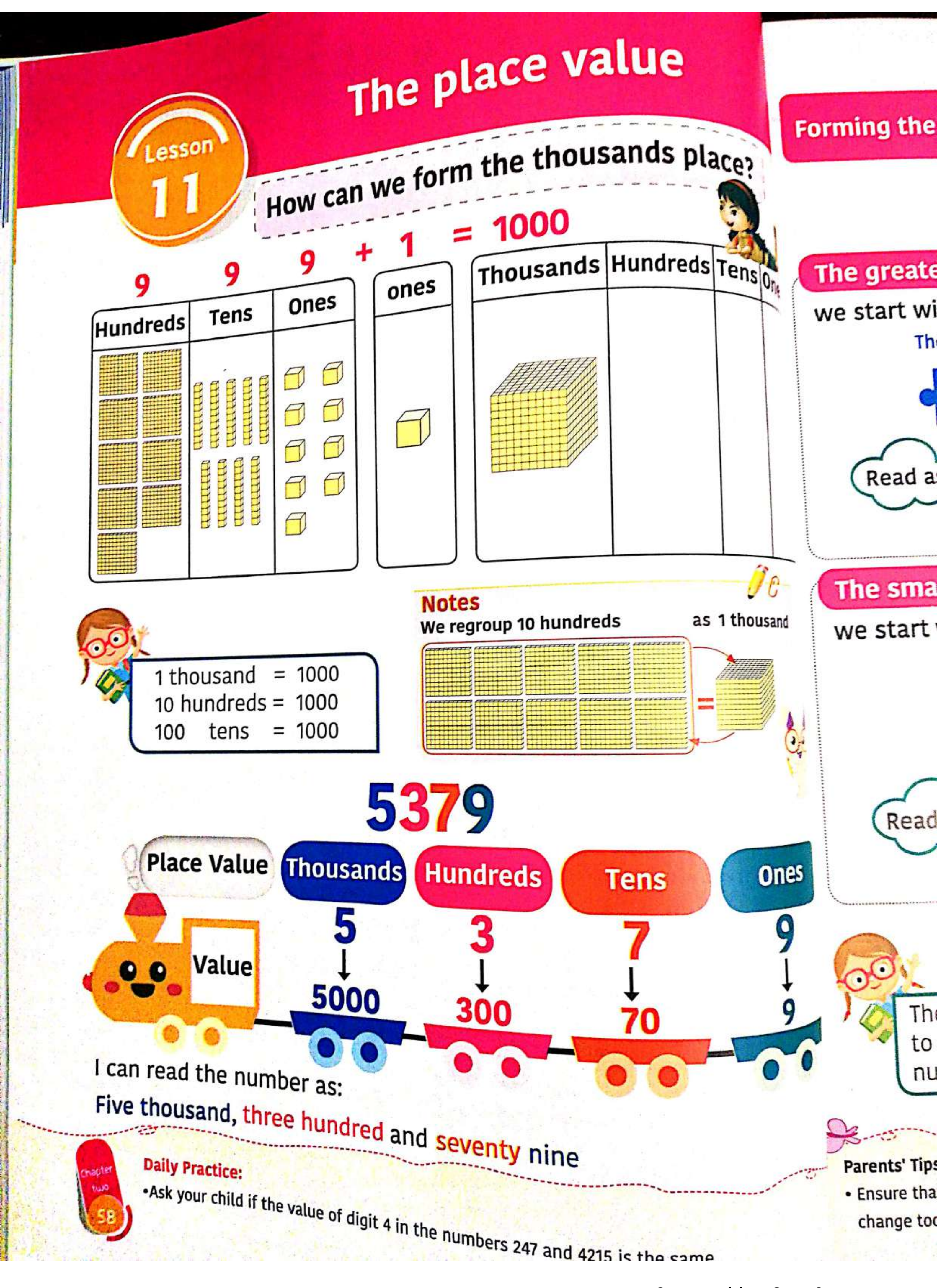
Chapter 2



3x3
3x4
2x2
2 1 3 8
Thousands
Hundreds
Tens
Ones
2000
100
30
8
Lesson
Lesson 11
Lesson 12
Lessons 13 & 14
Lessons 15 & 16
Lessons 17 & 18
Lessons 19 & 20

Pacing Guide

Lesson	Instructional Focus	Key vocabulary
Lesson 11	**The place value** • Explain how the value of a digit can change based on its place value. • Apply strategic thinking to construct a four-digit number with a high value.	• Digit • Number • Place value • Thousand
Lesson 12	**12 a : Reading thousand** • Read and write numbers up to the thousands place in standard and expanded form. • Create visual models of numerical value. **12 b : Compare and order numbers** • Compare numbers using symbols.	• Expanded form • Greater than • Less than • Standard notation
Lessons 13 & 14	**Ten thousands and hundred thousands place** • Read and write numbers up to the hundred thousands place in standard and expanded form. • Compare and order numbers up to the hundred thousands place. • Order a series of numbers up to the hundred thousands place.	• Hundred thousands • Ten thousands • Order • Skip count
Lessons 15 & 16	**Counting strategies** • Identify and practice strategies for counting groups of objects. • Use a variety of strategies to calculate the total number of items in an array. • Explain the strategies they used to calculate the total number of items in an array. • Solve repeated addition problems.	• Groups • Sets • Array • Column • Efficient • Repeated addition • Rows
Lessons 17 & 18	**Multiplication** • Use drawings, arrays and equations to solve repeated addition and multiplication problems. • Compare numbers using symbols. • Express repeated addition as multiplication. • Compare arrays to equal groups. • Explain how repeated addition and multiplication equations are related. • Compare two products using greater than, less than and equal to symbols.	• Equal • Total • Multiplication • Product
Lessons 19 & 20	**Commutative property** • Solve multiplication problems using array. • Investigate the commutative property of multiplication using arrays. • Explain multiplication and the commutative property of multiplication. • Think strategically to solve a mathematical problem.	• Commutative property • Factor



The place value
Lesson 11
How can we form the thousands place?
9 9 9 + 1 = 1000
Hundreds
Tens
Ones
ones
Thousands
Hundreds
Tens
Notes
We regroup 10 hundreds as 1 thousand
1 thousand = 1000
10 hundreds = 1000
100 tens = 1000
5379
Place Value
Thousands
Hundreds
Tens
Ones
5
3
7
9
Value
5000
300
70
9
I can read the number as:
Five thousand, three hundred and seventy nine
Daily Practice:
•Ask your child if the value of digit 4 in the numbers 247 and 4215 is the same
Chapter two
58
Forming the
The greate
we start wi
Read a
The sma
we start
Read
Parents' Tips
• Ensure tha
change to

Forming the greatest and the smallest 4-digit number.





The greatest 4-digit number:

we start with the greatest value number.

Thousands — 8 , Hundreds — 7 , Tens — 1 , Ones — 0





Read as: **Eight thousand, seven hundred and ten**

8710

The smallest 4-digit number:

we start with the smallest value number.

Thousands — 1 , Hundreds — 0 , Tens — 7 , Ones — 8











One thousand and seventy eight

1078



The value of 8 changes according to its order and its place in each number.

Notes:

We can't start a number with zero because, it has no value.







Parents' Tips:

- Ensure that your child knows that when we change the place of number its value will change too.

Activity 1

Find the place value and the value of the digit each of the following numbers as the exampl

Example

3561 — Place Value → **Thousands**
Value → 3000

a) 7382 — Place Value → ....
Value → ....

b) 4930 — Place Value → ....
Value → ....

c) 213 — Place Value → ....
Value → ....

Note

The value of 3 changes according to its place in each number.



Color the following digits according to the

5623   711   6008



The key:
- Thousands
- Hundreds
- Tens
- Ones

Parents' Tips:
- Ask your child to read the numbers in Activity 2 and color the digits according to the given

Activity 3 Complete as the example:

Example

Place Value: Th | H | T | O

7 2 1 8

Value: 7000 | 200 | 10 | 8

a)

Place Value: .... | .... | .... | ....

9 6 5 2

Value: .... | .... | .... | ....

b)

Place Value: .... | .... | .... | ....

1 3 9 0

Value: .... | .... | .... | ....

c)

Place Value: .... | .... | .... | ....

4 0 0 5

Value: .... | .... | .... | ....

Activity 4 Form the greatest number and the smallest number by using the given digits:

a) The greatest number .... | 6 , 5 , 8 , 5 | The smallest number ....

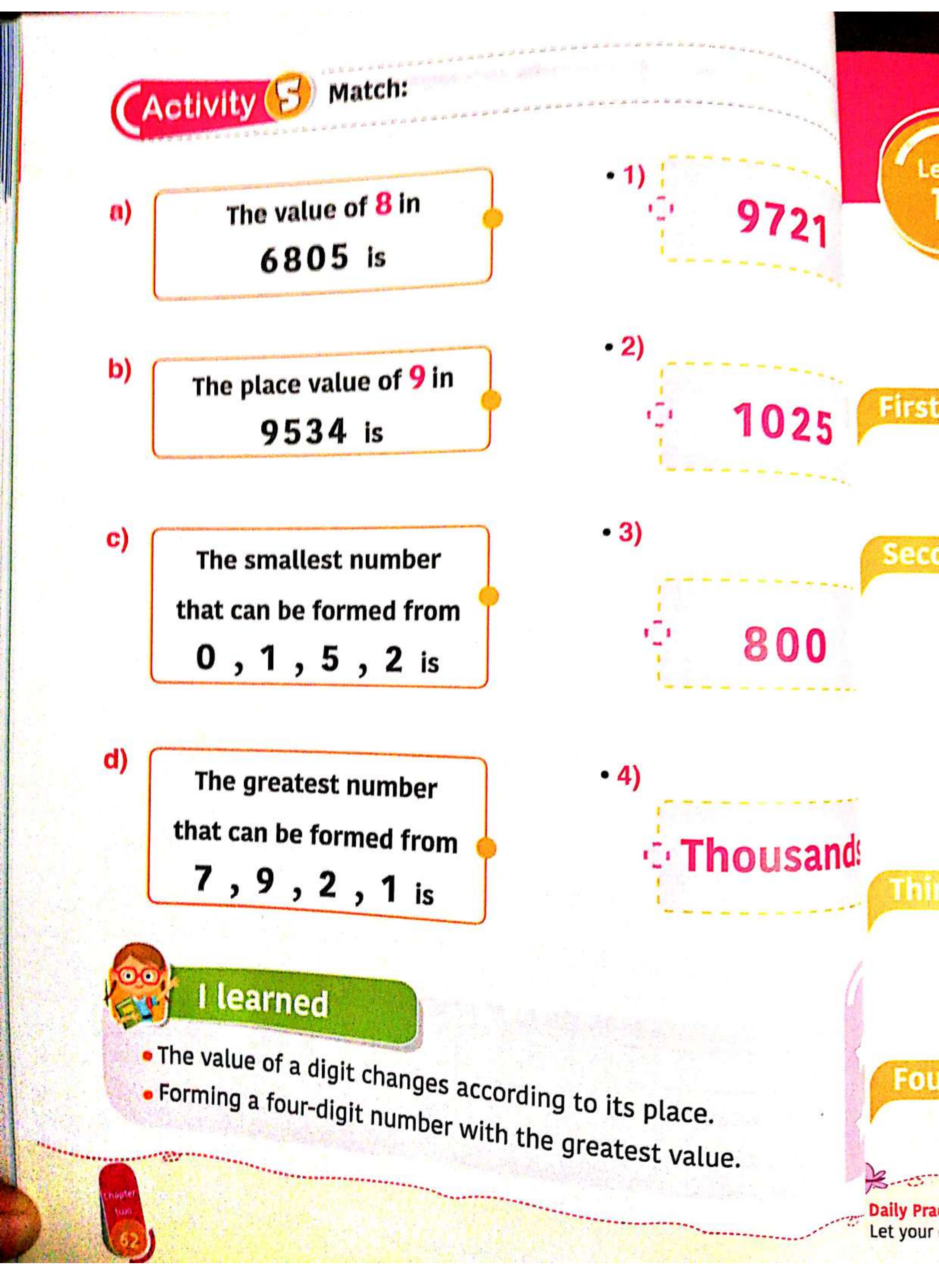
b) The greatest number .... | 9 , 0 , 8 , 2 | The smallest number ....

c) The greatest number .... | 3 , 2 , 5 , 2 | The smallest number ....

Parents' Tips:

•Tell your child that he/she has to start with the greatest number first in Activity 4.





Activity 5 Match:

a)	The value of 8 in 6805 is	1)	9721
b)	The place value of 9 in 9534 is	2)	1025
c)	The smallest number that can be formed from 0 , 1 , 5 , 2 is	3)	800
d)	The greatest number that can be formed from 7 , 9 , 2 , 1 is	4)	Thousands

I learned

- The value of a digit changes according to its place.
- Forming a four-digit number with the greatest value.

Lesson 12

(A) Reading thousand



We have four forms to represent a four-digit number:

First Standard form

2 4 6 8

Second Base ten form

Using the place value mat to show the numerical value of the number.

Thousands	Hundreds	Tens	Ones

Third Expanded form

2468 = 2000 + 400 + 60 + 8

Put **equal** and **addition** signs to represent the value of each digit in the number.

Fourth Word form

Two thousand, four hundred and sixty eight.

Daily Practice:
Let your child read the number 7302 and tell you the place value of each digit.





Represent the numbers in the place value mat then write them in the expanded form:

Example

Standard form	Thousands	Hundreds	Tens	Ones
2130				
Expanded form	2000 +	100 +	30 +	0

a)

Standard form	Thousands	Hundreds	Tens	Ones
1518				
Expanded form	.... +	.... +	.... +	....

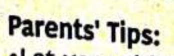
b)

Standard form	Thousands	Hundreds	Tens	Ones
1404				
Expanded form	.... +	.... +	.... +	....

c)

Standard form	Thousands	Hundreds	Tens	Ones
3009				
Expanded form	.... +	.... +	.... +	....

Parents' Tips:
•Let your child draw and write the numbers in the expanded and word forms.



Lesson 12

How can w

Less than

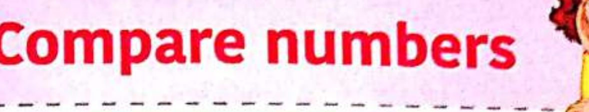
First
Second
Third

We represe
4 th

Parents' Tips:
•Tell your child th
always facing th



(B) Compare and order numbers



Compare numbers

How can we compare four-digit numbers?

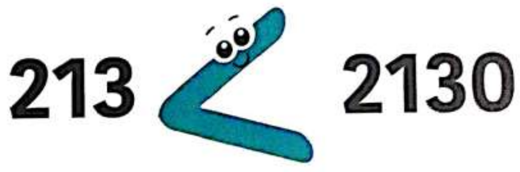
Less than  **More than**  **Equal to** 

8056  **8073**

First : Compare the thousands digits **8 = 8**

Second : Compare the hundreds digits **0 = 0**

Third : Compare the tens and ones digits **56 < 73**



3 digits < 4 digits

70 hundred  **7000**

Hundred means adding 2 zeroes to the right of the number.

4 thousand  **40 tens**

We represent thousand as 3 zeroes

4 thousand = 4000

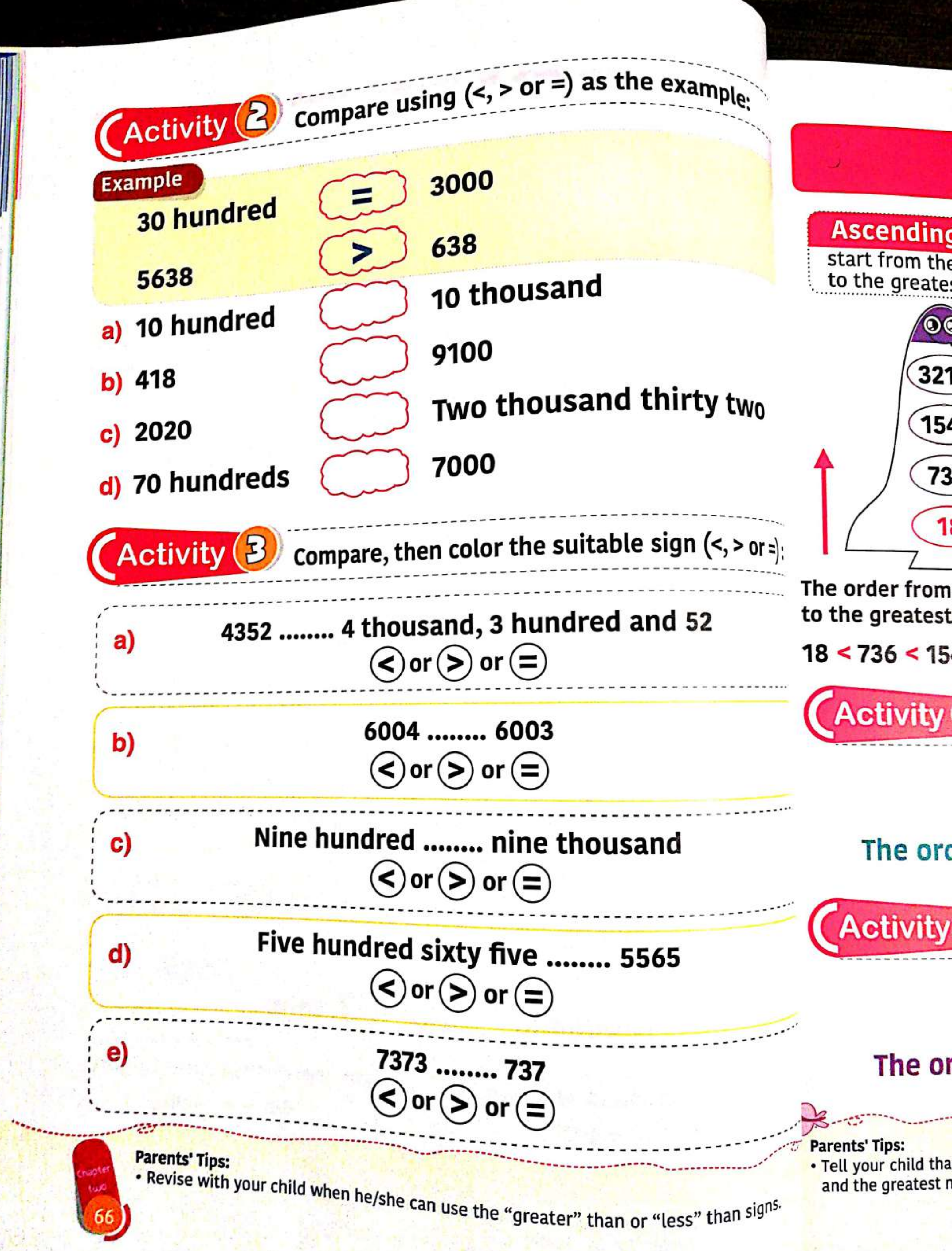
We represent tens as 1 zero

40 tens = 400

Parents' Tips:

- Tell your child that the crocodile always wants to eat the bigger number. So the big mouth is always facing the number that is greater.





Activity 2 Compare using (<, > or =) as the example:

Example

30 hundred	=	3000
5638	>	638
a) 10 hundred		10 thousand
b) 418		9100
c) 2020		Two thousand thirty two
d) 70 hundreds		7000

Activity 3 Compare, then color the suitable sign (<, > or =):

a) 4352 .... 4 thousand, 3 hundred and 52

< or > or =

b) 6004 6003

< or > or =

c) Nine hundred .... nine thousand

< or > or =

d) Five hundred sixty five 5565

< or > or =

e) 7373 737

< or > or =

Parents' Tips:

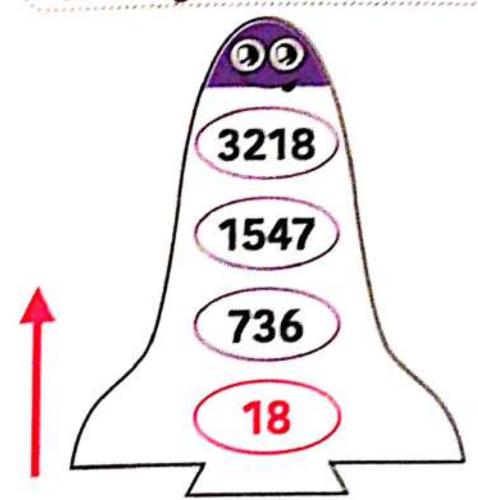
- Revise with your child when he/she can use the "greater" than or "less" than signs.

Ordering Numbers



Ascending Order

start from the **smallest** to the greatest

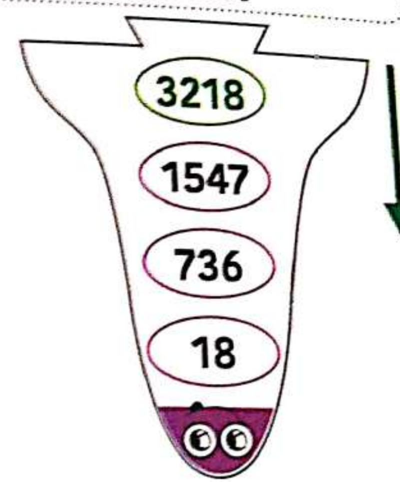


The order from the **least** to the greatest:

18 < 736 < 1547 < 3218

Descending Order

start from the **greatest** to the smallest



The order from the **greatest** to the least:

3218 > 1547 > 736 > 18



Arrange the following numbers from the least to the greatest:

3,713	7,313	100	7000

The order ....



Arrange the following numbers from the greatest to the least:

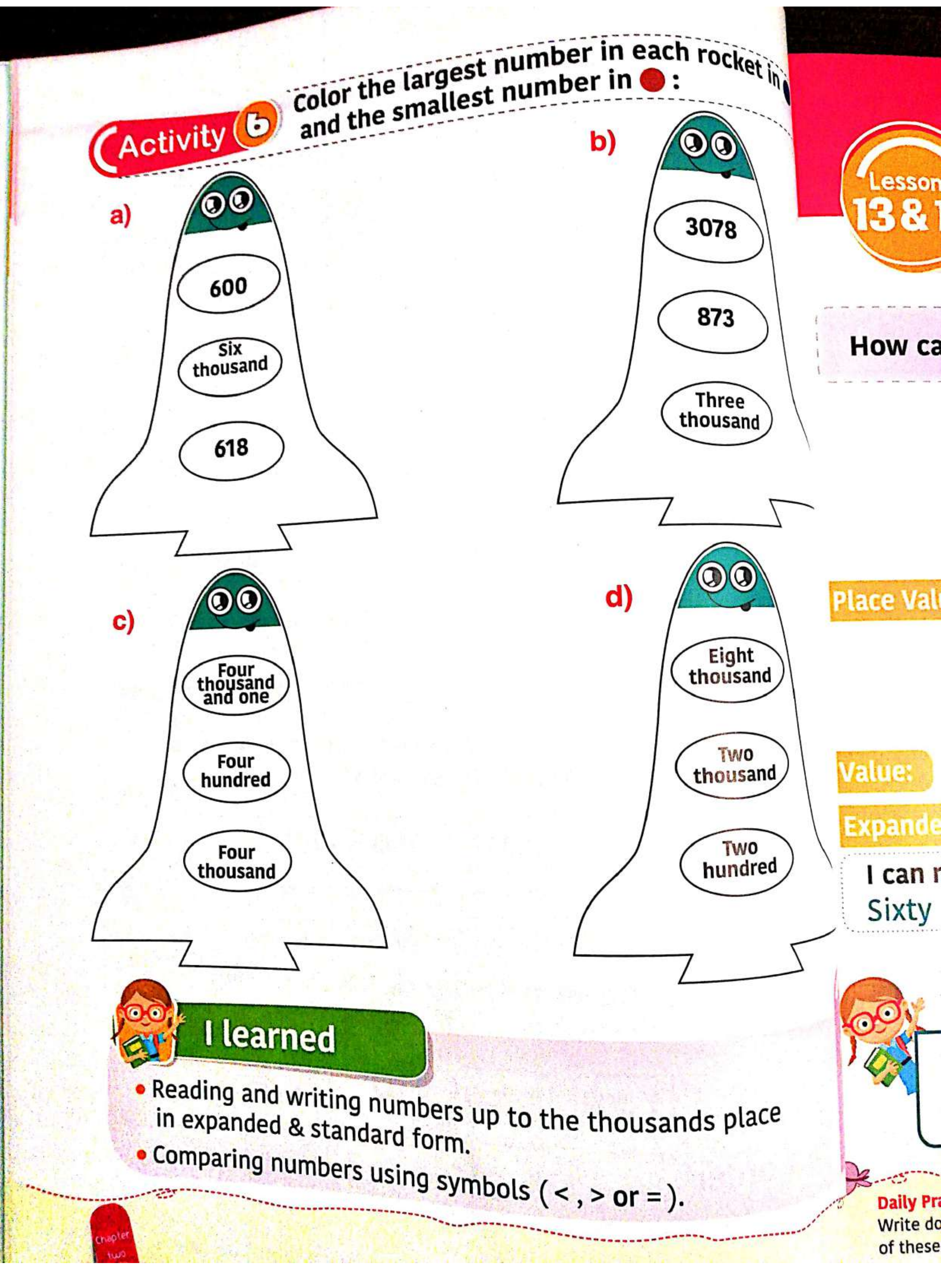
1,002	1,200	2,001	3000

The order ....

Parents' Tips:

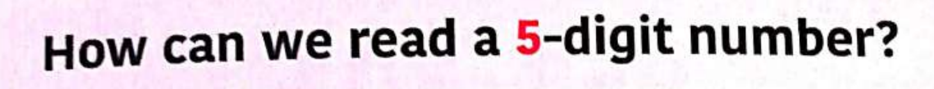
- Tell your child that the key for ascending order and descending order is to know the least and the greatest number.




Activity 6
Color the largest number in each rocket in
and the smallest number in :
a)
600
Six thousand
618
b)
3078
873
Three thousand
c)
Four thousand and one
Four hundred
Four thousand
d)
Eight thousand
Two thousand
Two hundred
I learned
• Reading and writing numbers up to the thousands place in expanded & standard form.
• Comparing numbers using symbols (< , > or =).
Chapter two
Daily Pra
Write do
of these



Ten thousands and hundred thousands place



How can we read a 5-digit number?



68, 214

Place Value	Ten Thousands	Thousands	,	Hundreds	Tens	Ones
	6	8	,	2	1	4
	↓	↓		↓	↓	↓
Value:	60, 000	8000		200	10	4

Expanded form: 60, 000 + 8000 + 200 + 10 + 4

I can read the number as:
Sixty eight thousand, two hundred and fourteen



10 thousands = 10, 000
100 hundreds = 10, 000
1000 Tens = 10, 000

Remember

We have to put **a comma** between thousands and hundreds.



Daily Practice:
Write down the numbers 2700 , 530, 19100 and 101 and ask your child to tell you which one of these numbers is more or less than one thousand.



How can we read a 6-digit number?

951, 301

Place Value	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	9	5	1,	3	0	2
Value:	900, 000	50, 000	1000	300	0	2

Expanded form: 900, 000 + 50, 000 + 1000 + 300 + 0 + 2

I can read the number as:
Nine hundred fifty one thousand, three hundred and two



Remember that:
100 thousand = 100, 000
1000 hundred = 100, 000
10000 tens = 100, 000



Thousand family

951 , 302



Remember

We put the family name after reading the first 3 digits, then we put comma.

Home Activity:
- Ask your child to write 3 different numbers including a Hundred thousand value.



Find the place value and the value of the colored digit in each number:

a) 354,691

Place value: ....

Value: ....

b) 206,143

Place value: ....

Value: ....

c) 318,064

Place value: ....

Value: ....

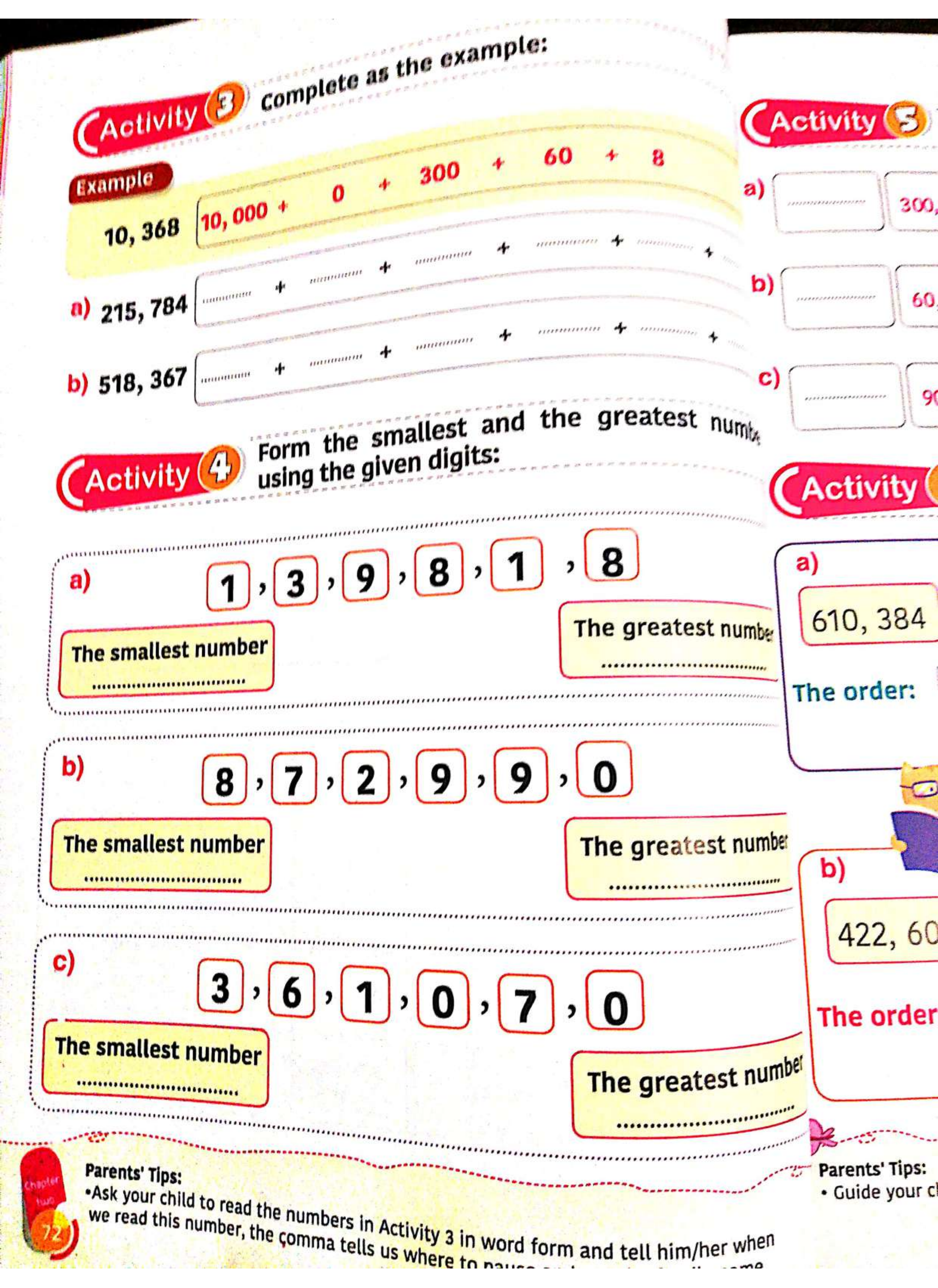
d) 181,900

Place value: ....

Value: ....

Activity 2 Complete the table:

	Number	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	Example 36, 219	-	3	6	2	1	9
a)	504, 622						
b)	18, 943						
c)	3, 412						
d)	129, 684						



Activity 3 Complete as the example:

Example

10, 368 = 10, 000 + 0 + 300 + 60 + 8

a) 215, 784 .... + ... + ... + ... + ... +

b) 518, 367 .... + ... + ... + ... + ... +

Activity 4 Form the smallest and the greatest numb[er] using the given digits:

a) 1 , 3 , 9 , 8 , 1 , 8

The smallest number ....

The greatest numbe[r] ....

b) 8 , 7 , 2 , 9 , 9 , 0

The smallest number ....

The greatest number ....

c) 3 , 6 , 1 , 0 , 7 , 0

The smallest number ....

The greatest number ....

Parents' Tips:

•Ask your child to read the numbers in Activity 3 in word form and tell him/her when we read this number, the comma tells us where to pause ...

Activity 5

a) 300,

b) 60,

c) 9

Activity

a) 610, 384

The order:

b) 422, 60

The order

Parents' Tips:

• Guide your c

Activity 5 Write the number:

a) .... | 300, 000 + 50, 000 + 2000 + 0 + 40 + 9

b) .... | 60, 000 + 7000 + 300 + 20 + 0

c) .... | 900, 000 + 40, 000 + 1000 + 200 + 30 + 7

Activity 6 Put the following numbers in order from the greatest to the smallest:

a)

610, 384 | 61, 582 | 4, 218 | 6, 009

The order: ....

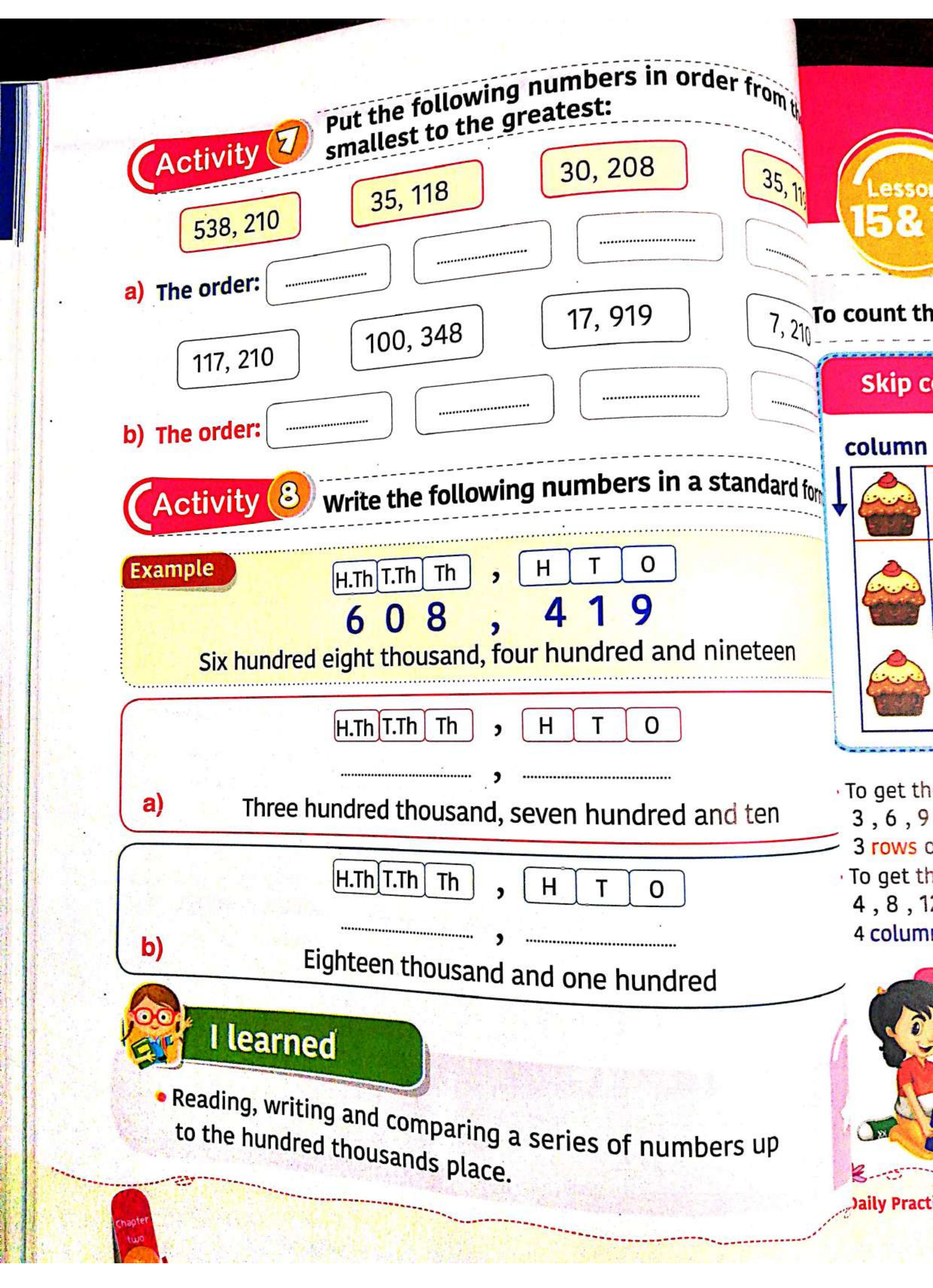
b)

422, 608 | 428, 619 | 42, 318 | 41, 319

The order: ....

Parents' Tips:

- Guide your child to know that the numbers with the more digits are the largest.



Activity 7

Put the following numbers in order from the smallest to the greatest:

538, 210	35, 118	30, 208	35, 11…

a) The order: .... , ... , ... , ...

117, 210	100, 348	17, 919	7, 210

b) The order: .... , ... , ... , ...

Activity 8

Write the following numbers in a standard form

Example

H.Th	T.Th	Th	,	H	T	O
6	0	8	,	4	1	9

Six hundred eight thousand, four hundred and nineteen

a)

H.Th	T.Th	Th	,	H	T	O

.... , ...

Three hundred thousand, seven hundred and ten

b)

H.Th	T.Th	Th	,	H	T	O

.... , ...

Eighteen thousand and one hundred

I learned

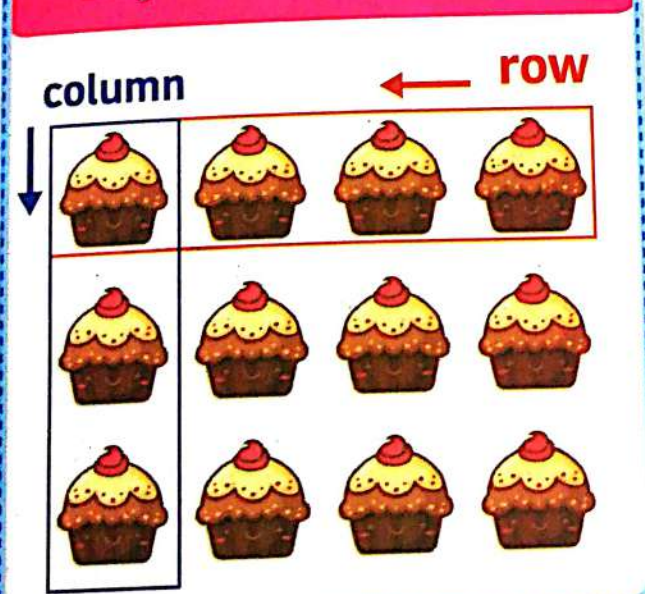
- Reading, writing and comparing a series of numbers up to the hundred thousands place.



Counting Strategies

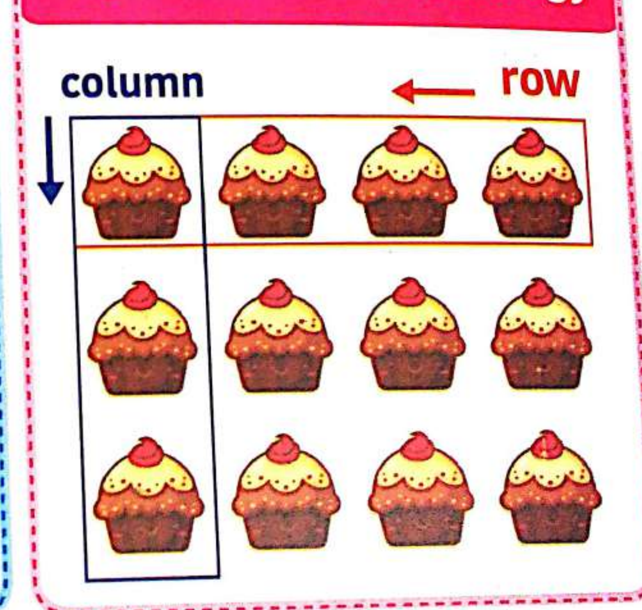
To count the total number of , we can use 2 efficient strategies:

Skip counting strategy



- To get the rows, skip counting by 3
  3 , 6 , 9 , 12
  3 rows of 4.
- To get the columns, skip counting by 4
  4 , 8 , 12
  4 columns of 3.

Repeated addition strategy

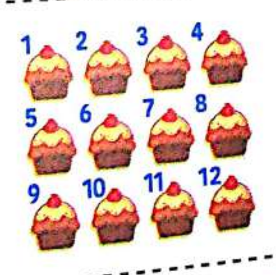


- To get the total rows = 4 + 4 + 4 = 12
  3 rows of 4.
- To get the total columns = 3 + 3 + 3 + 3 = 12
  4 columns of 3.

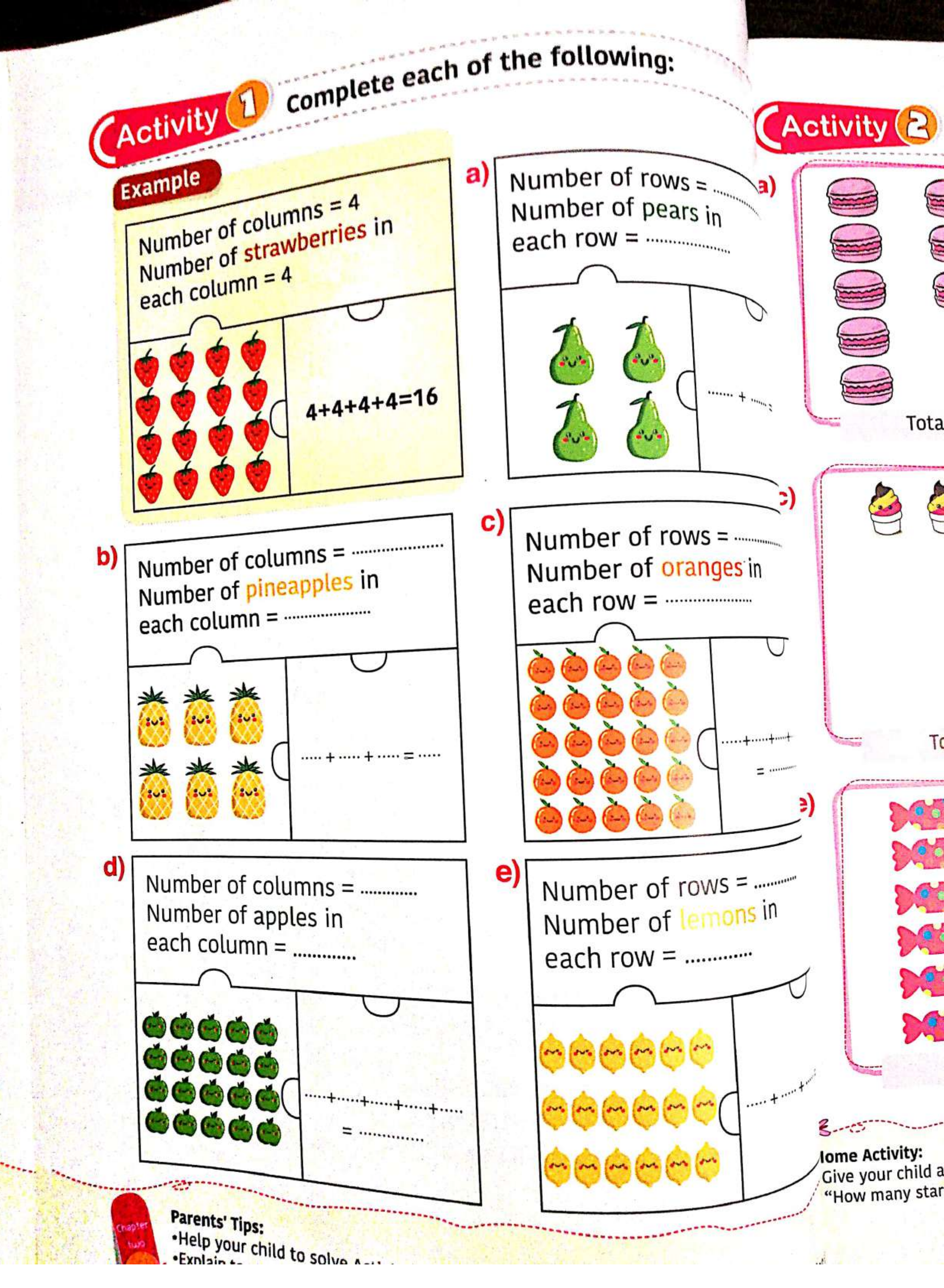
Counting one by one strategy:



We can use counting one by one strategy but it is not an efficient strategy.



Daily Practice: Ask your child to count up to 30 using skip counting by 3's.



Activity 1 Complete each of the following:

Example

Number of columns = 4
Number of strawberries in each column = 4

4+4+4+4=16

a) Number of rows = ...
Number of pears in each row = ...

.... + ... =

b) Number of columns = ...
Number of pineapples in each column = ...

..... + ... + ... = ...

c) Number of rows = ...
Number of oranges in each row = ...

.....+.....+.....+
= ....

d) Number of columns = ...
Number of apples in each column = ...

.....+.....+.....+.....+.....
= ....

e) Number of rows = ...
Number of lemons in each row = ...

..... + ... +

Activity 2

a)

Tota

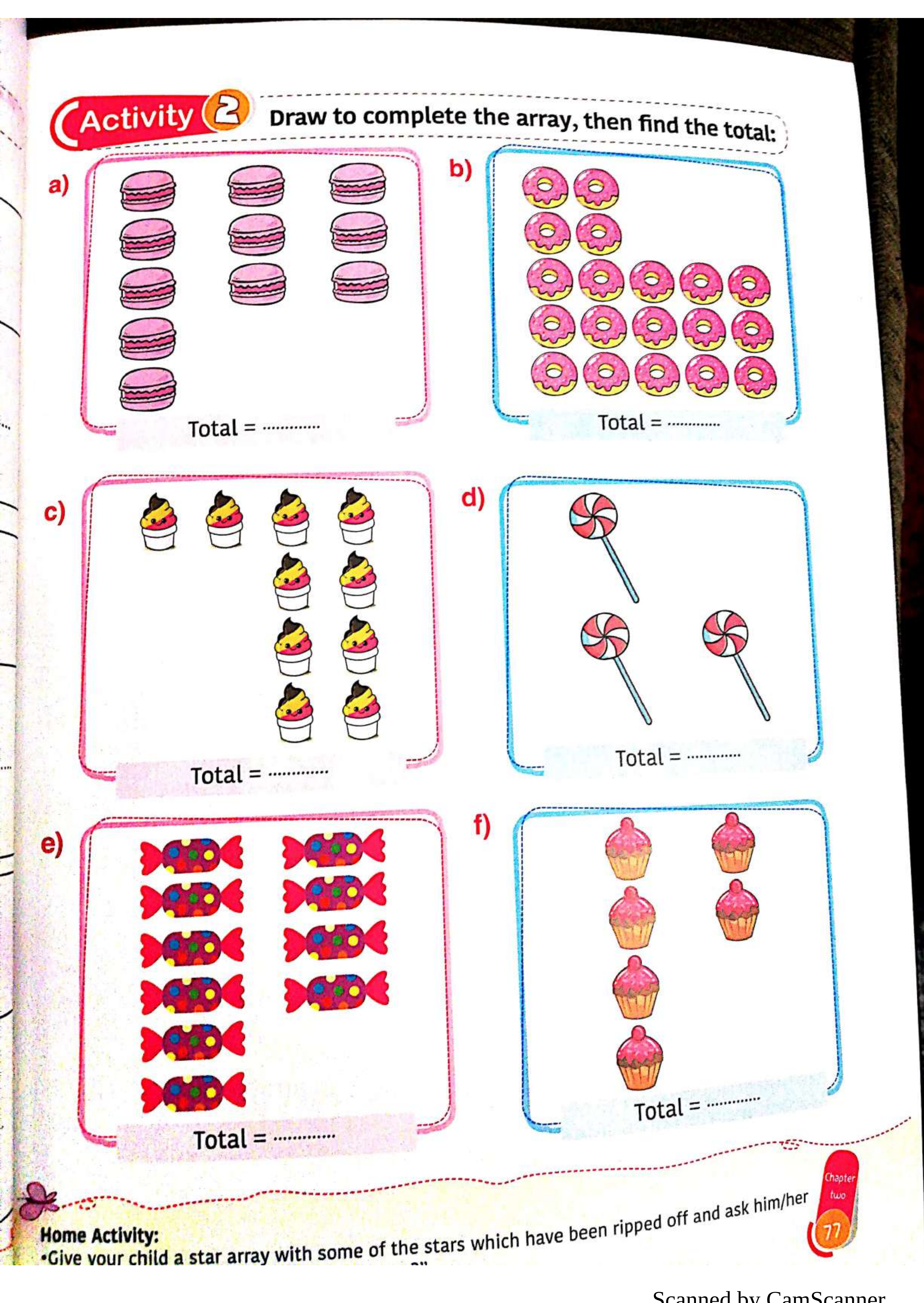
c)

To

e)

Home Activity:
Give your child a
"How many star

Parents' Tips:
•Help your child to solve Act...
•Explain to...



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Activity 3 Complete:

Example

4 rows = 2 + 2 + 2 + 2 = 8
2 columns = 4 + 4 = 8

a)

...... rows = ... + ... + ... = ...
...... columns = ... + ... + ... = ...

b)

...... rows = ... + ... = ...
...... columns = ... + ... + ... + ... + ... = ...

c)

...... rows = ... + ... + ... = ...
...... columns = ... + ... + ... + ... + ...

d)

...... rows = ... + ... + ... + ... = ...
...... columns = ... + ... + ... + ... = ...

e)

...... rows = ... + ... + ... + ... = ...
...... columns = ... + ... + ... = ...

I learned

- Calculating the total number of items in an array.
- Counting groups of objects.
- Solving repeated addition.

Lessons 17&18

Example 1

Row

Co

Example

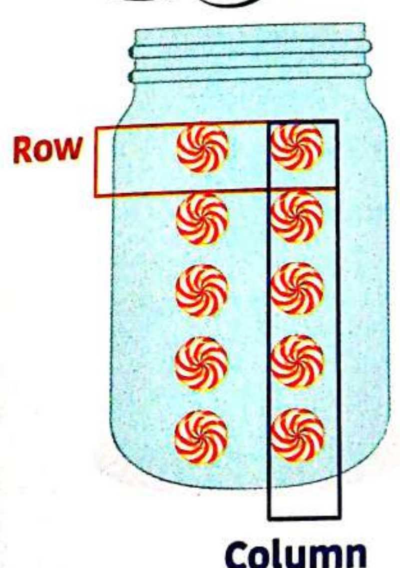
Daily Practice:
Tell your child t
we need to get



Multiplication

We can represent the total number of array.





Using repeated addition equation:
5 rows = 2 + 2 + 2 + 2 + 2 = 10
2 columns = 5 + 5 = 10

Using multiplication equation:

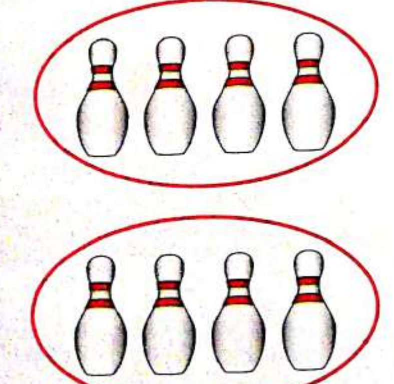
5  **2 =** 

Multiplication symbol

Product of multiplication

Read as: **Five times two equals ten.**





2 circles with 4 in each so
4 + 4 = 8

Using multiplication equation:

2  **4**  

Multiplication symbol

Product of multiplication

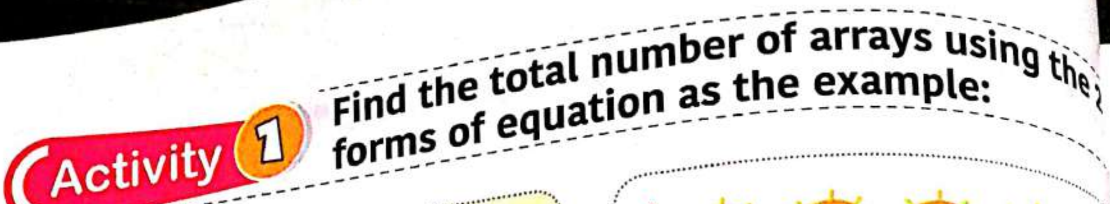
Read as: **2 groups of 4 equals 8**

We can compare the product of and
10 > 8



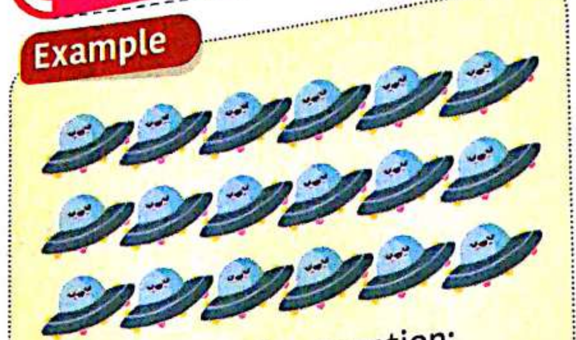
Daily Practice:
Tell your child that we can count by 2's five times to get the number 10, so how many times we need to get the number 18?





Activity 1 Find the total number of arrays using the 2 forms of equation as the example:

Example



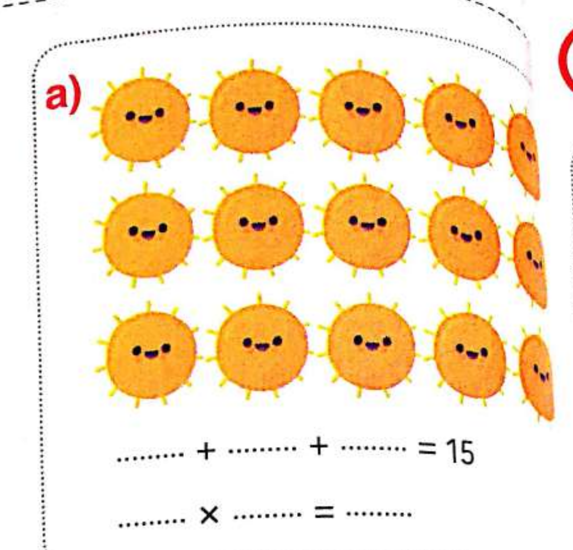
Repeated addition equation:

6 + 6 + 6 = 18

Multiplication equation:

3 × 6 = 18

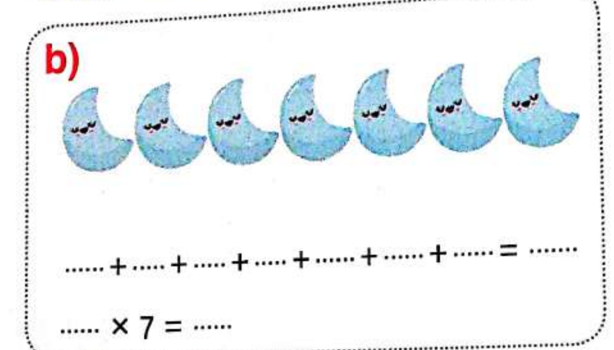
a)



……… + ……… + ……… = 15

……… × ……… = ………

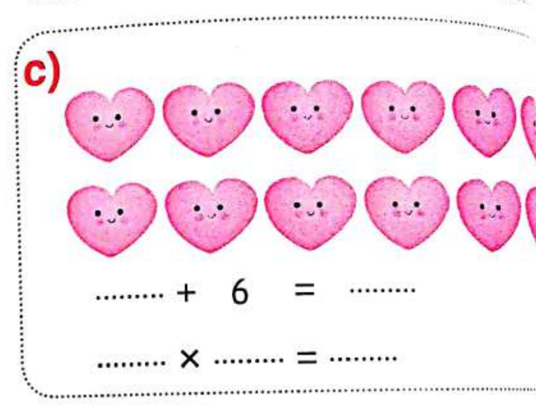
b)



…… + …… + …… + …… + …… + …… + …… = ……

…… × 7 = ……

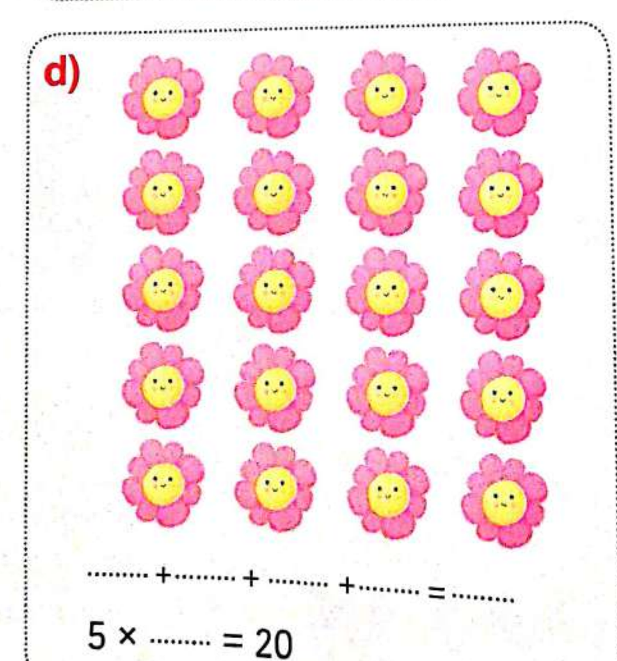
c)



……… + 6 = ………

……… × ……… = ………

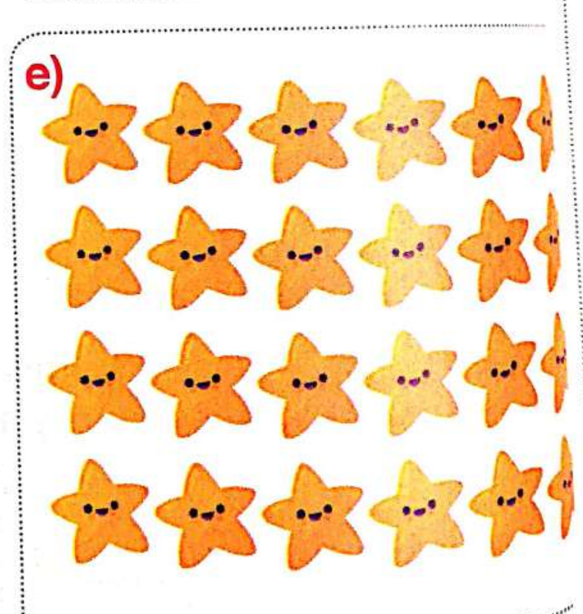
d)

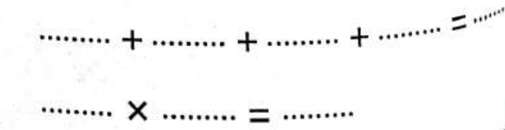


……… + ……… + ……… + ……… = ………

5 × ……… = 20

e)





……… + ……… + ……… + ……… = ………

……… × ……… = ………

Parents' Tips:

•Help your child point to "x". Tell him /her that this sign is called the multiplication symb

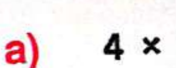


Activity









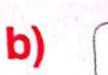
a) 4 ×

The number o





b)

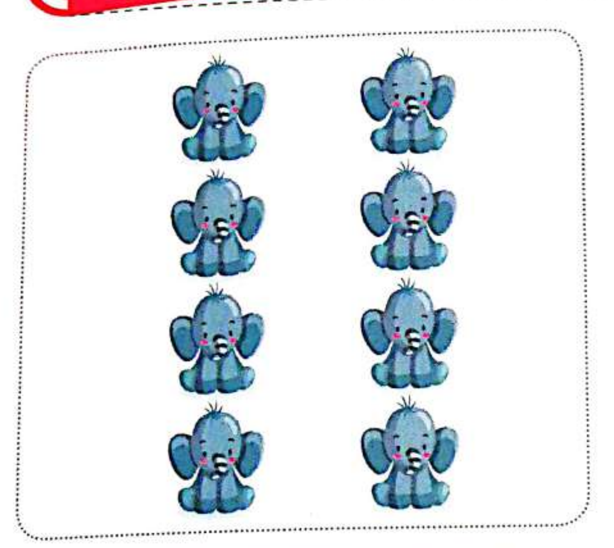


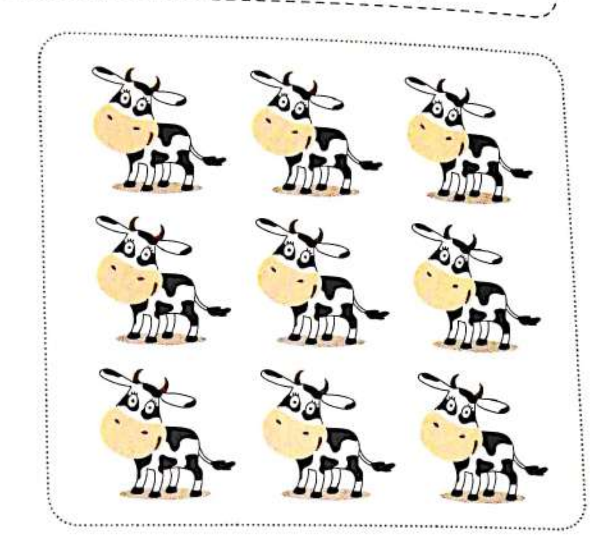
The numb

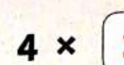
Parents' Tips:

•Mention to yo
to get the pr

Activity 2 Complete the multiplication equation to describe the following arrays, then choose <, > or = :

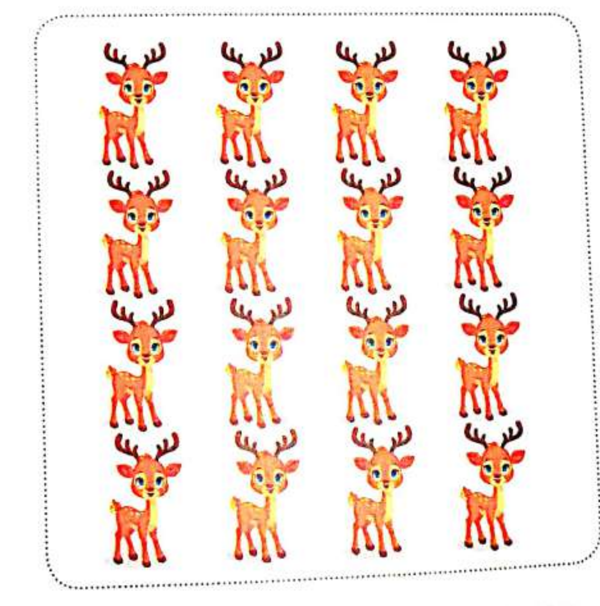


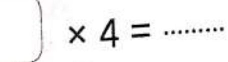


a)  4 × [2] = 8 **(<, > or =)** [ ] × 3 = ...

The number of  The number of 



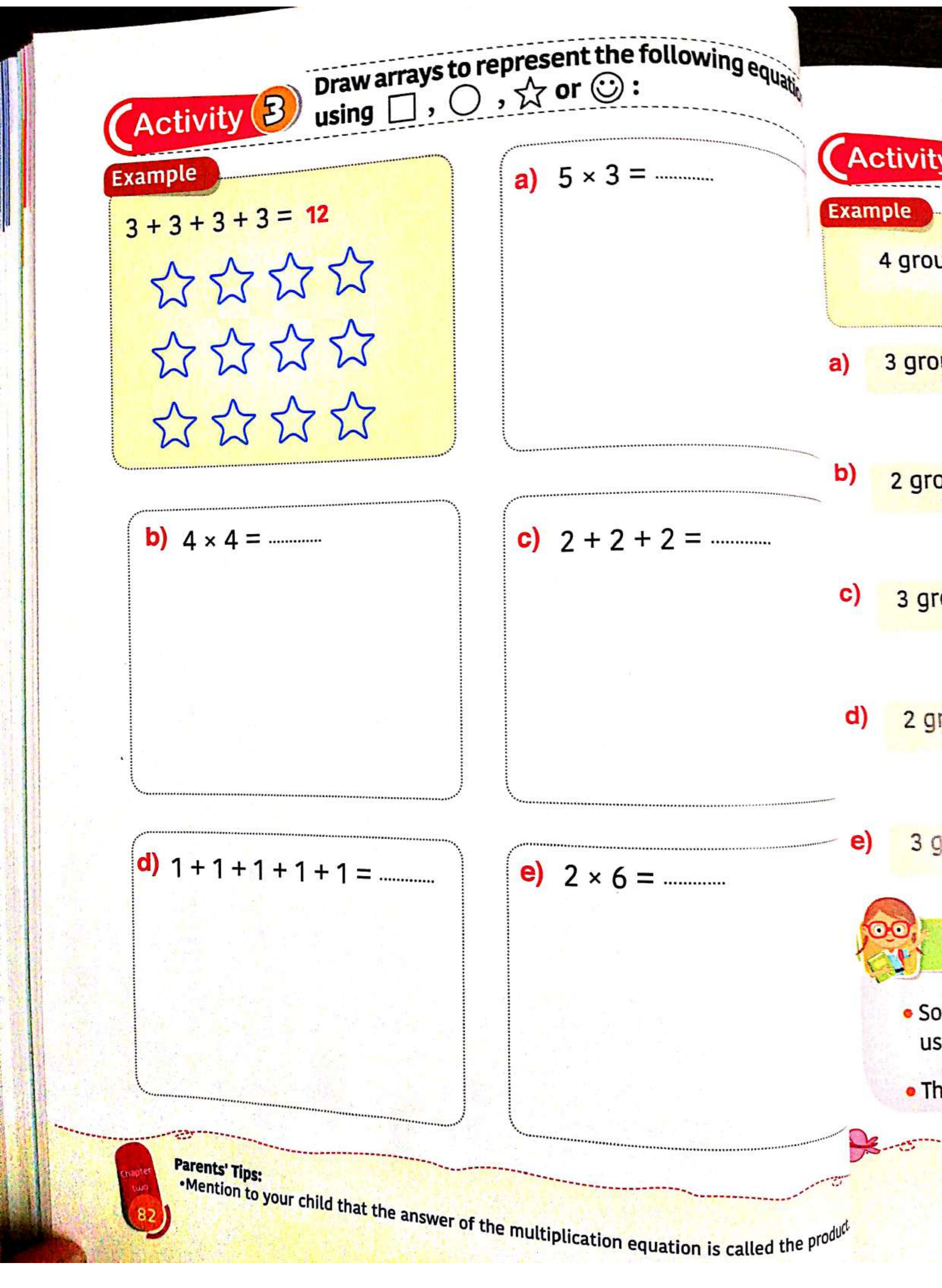


b)  [ ] × 6 = ...  **(<, > or =)**  [ ] × 4 = ...

The number of  The number of 

Parents' Tips:

- Mention to your child that multiplication tells us how many times we need to add a number to get the product.



Activity 3

Draw arrays to represent the following equations using □ , ○ , ☆ or ☺ :

Example

$3 + 3 + 3 + 3 =$ **12**

☆ ☆ ☆ ☆
☆ ☆ ☆ ☆
☆ ☆ ☆ ☆

a) $5 \times 3 =$ ....

b) $4 \times 4 =$ ....

c) $2 + 2 + 2 =$ ....

d) $1 + 1 + 1 + 1 + 1 =$ ....

e) $2 \times 6 =$ ....

Parents' Tips:

• Mention to your child that the answer of the multiplication equation is called the product.

Activity 4 Match:

Example

	4 groups of 2	3×3		2 + 2 + 2 + 2
a)	3 groups of 3	4×2	1)	8 + 8
b)	2 groups of 8	3×5	2)	3 + 3 + 3
c)	3 groups of 5	2×8	3)	5 + 5 + 5
d)	2 groups of 9	3x1	4)	9 + 9
e)	3 groups of 1	2x9	5)	1 + 1 + 1



I learned



- Solving repeated addition and multiplication problems using arrays and physical models.
- The relation between addition & multiplication equations.



Commutative Property

Commutative property in addition:

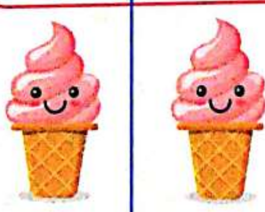
$5 + 4 = 4 + 5$

9 9

Adding numbers in different order gives the same sum.

Commutative property in multiplication:




row

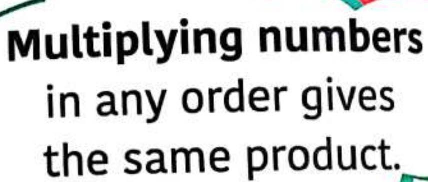
3 × 2 = 6

rows columns

Total number is 6



Multiplying numbers in any order gives the same product.








2 × 3 = 6

rows columns

Total number is 6



Activity

Example




a)

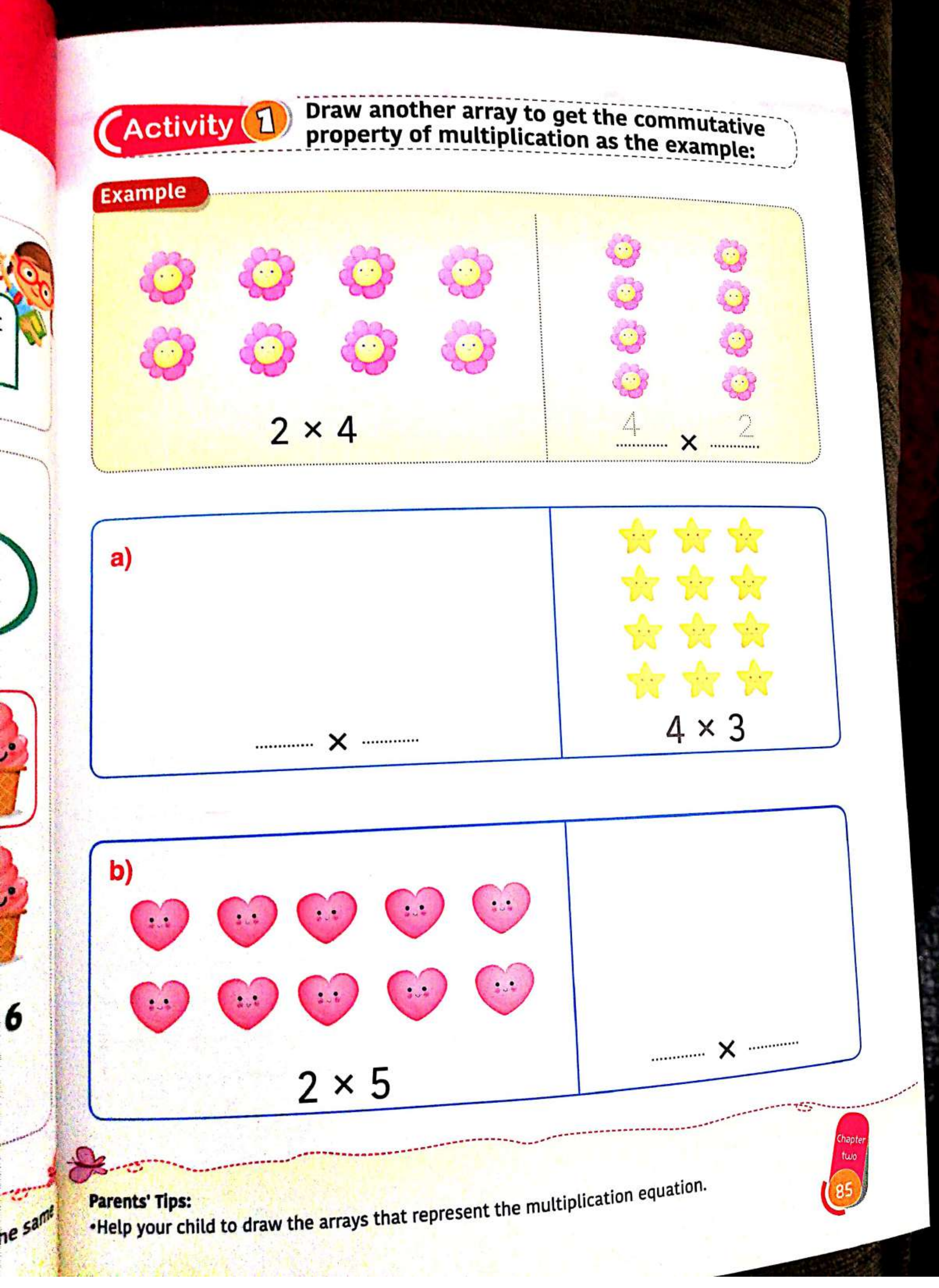
b)



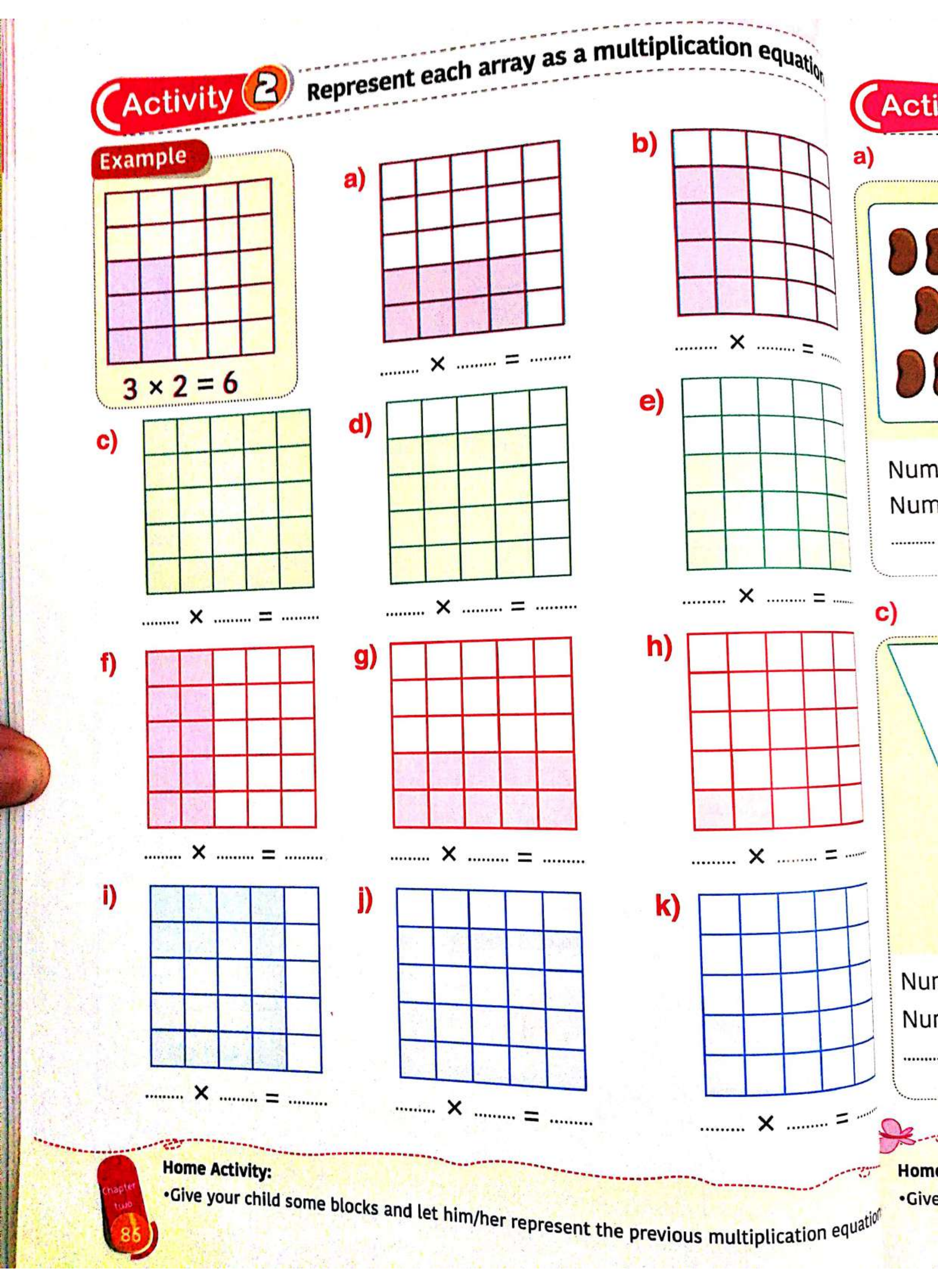


Daily Practice: Remind your child that the ... total ...

Parents' Ti
•Help your



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Activity 2 Represent each array as a multiplication equation

Example

3 × 2 = 6

a) .... × .... = ...

b) .... × .... = ...

c) .... × .... = ...

d) .... × .... = ...

e) .... × .... = ...

f) .... × .... = ...

g) .... × .... = ...

h) .... × .... = ...

i) .... × .... = ...

j) .... × .... = ...

k) .... × .... = ...

Home Activity:

•Give your child some blocks and let him/her represent the previous multiplication equation

Acti

a)

Num

Num

c)

Nur

Nur

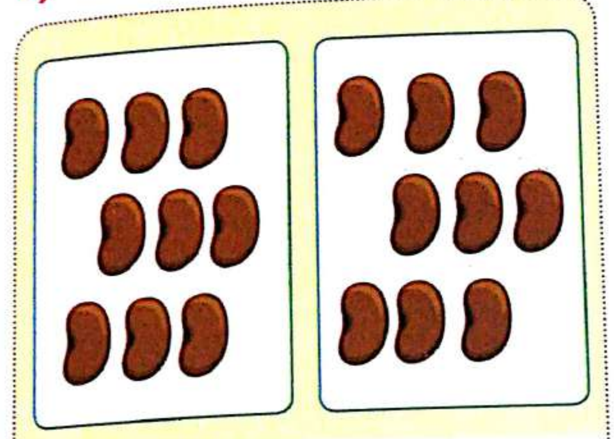
Home

•Give



Complete:

a)

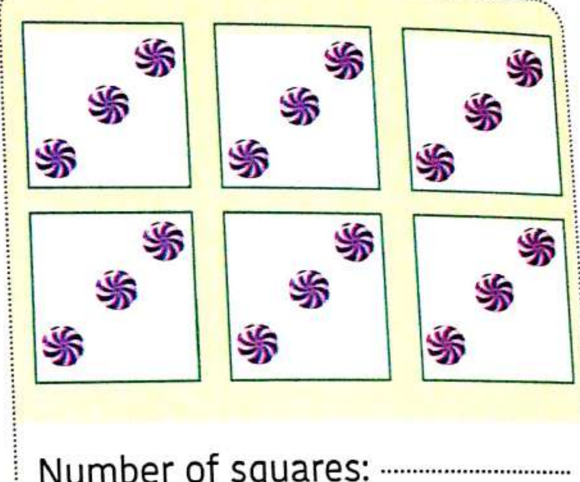


Number of rectangles: ....

Number of beans: ....

.... groups of .... = ...

b)

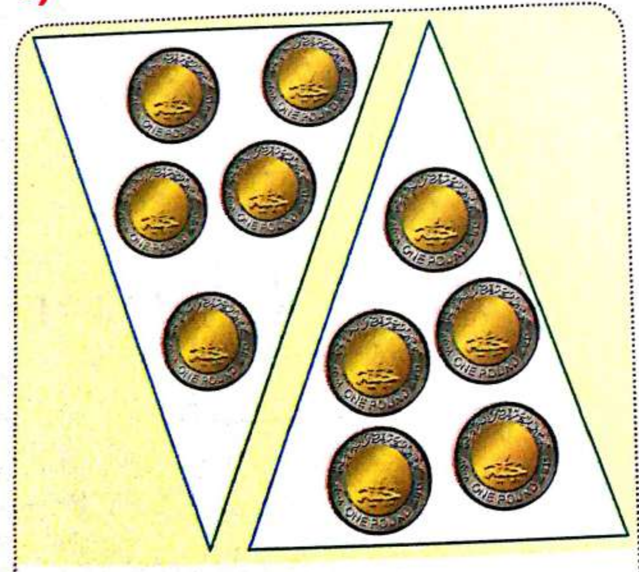


Number of squares: ....

Number of candies: ....

.... groups of .... = ...

c)

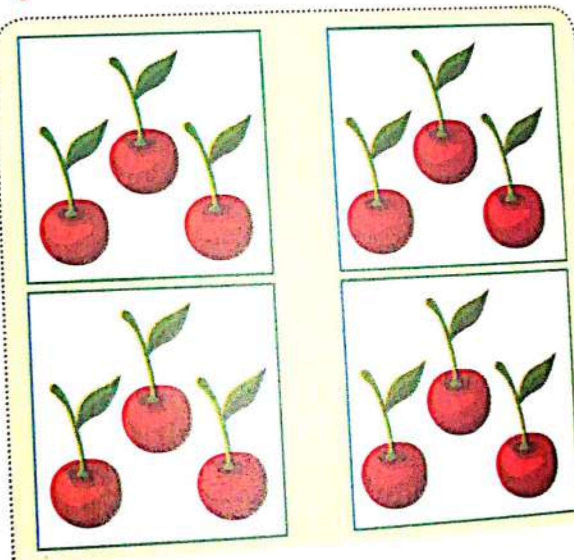


Number of triangles: ....

Number of coins: ....

.... groups of .... = ...

d)



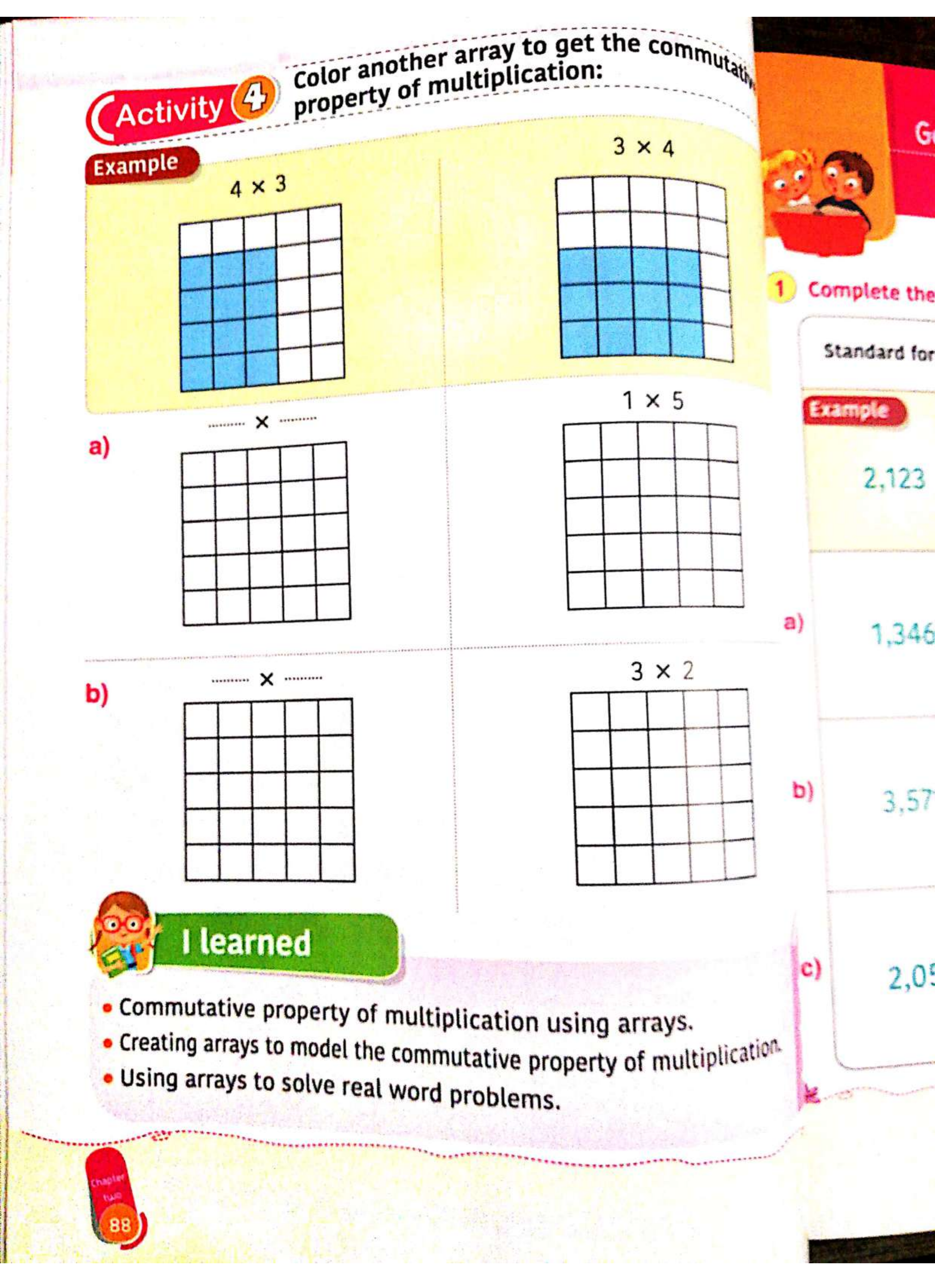
Number of squares: ....

Number of cherries: ....

.... groups of .... = ...

Home Activity:

•Give your child some beans or macaroni and let him/her form groups to represent 5x8 and 4x10.



Activity 4

Color another array to get the commutative property of multiplication:

Example

4 × 3 | 3 × 4

a) .... × .... | 1 × 5

b) .... × .... | 3 × 2

I learned

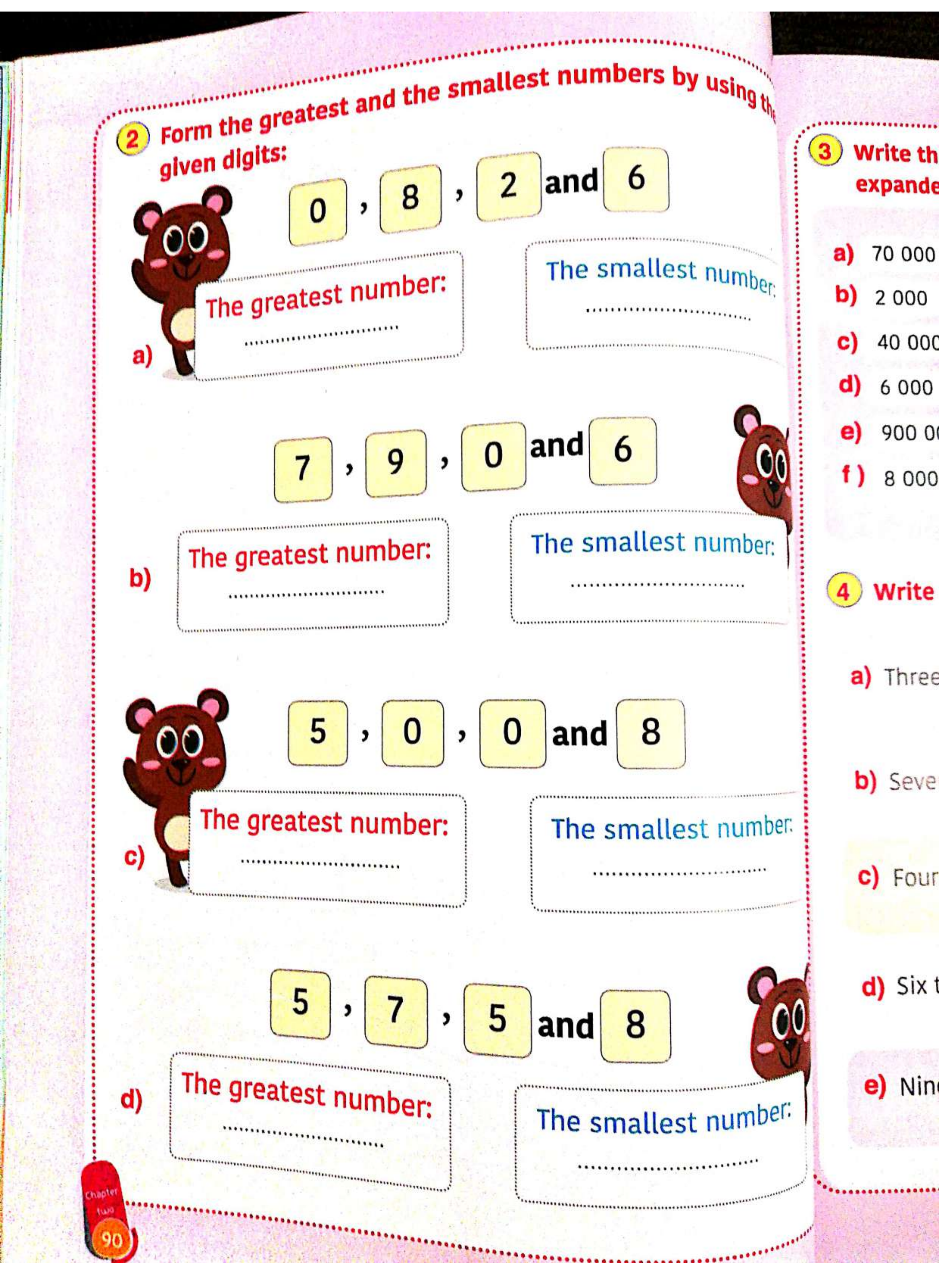
- Commutative property of multiplication using arrays.
- Creating arrays to model the commutative property of multiplication.
- Using arrays to solve real word problems.



General activities on Chapter 2

1 Complete the following table as the example:

	Standard form	Base ten form	Expanded form
Example	2,123		2000 + 100 + 20 + 3
a)	1,346		.... + ... + ... + ...
b)	3,571		.... + ... + ... + ...
c)	2,056		.... + ... + ... + ...



2 Form the greatest and the smallest numbers by using the given digits:

a) 0 , 8 , 2 and 6

The greatest number: ....

The smallest number: ....

b) 7 , 9 , 0 and 6

The greatest number: ....

The smallest number: ....

c) 5 , 0 , 0 and 8

The greatest number: ....

The smallest number: ....

d) 5 , 7 , 5 and 8

The greatest number: ....

The smallest number: ....

3 Write th
expande

a) 70 000
b) 2 000
c) 40 000
d) 6 000
e) 900 00
f) 8 000

4 Write

a) Three
b) Seve
c) Four
d) Six t
e) Nin

3 Write the standard form for each of the following expanded form:

a) 70 000 + 1 000 + 300 + 20 + 9 = ...

b) 2 000 + 400 + 10 + 7 = ...

c) 40 000 + 0 + 100 + 80 + 2 = ...

d) 6 000 + 700 + 50 + 1 = ...

e) 900 000 + 0 + 1 000 + 700 + 60 + 3 = ...

f) 8 000 + 900 + 0 + 4 = ...



4 Write the following word forms in standard forms:

a) Three thousand, four hundred and fifteen = ...

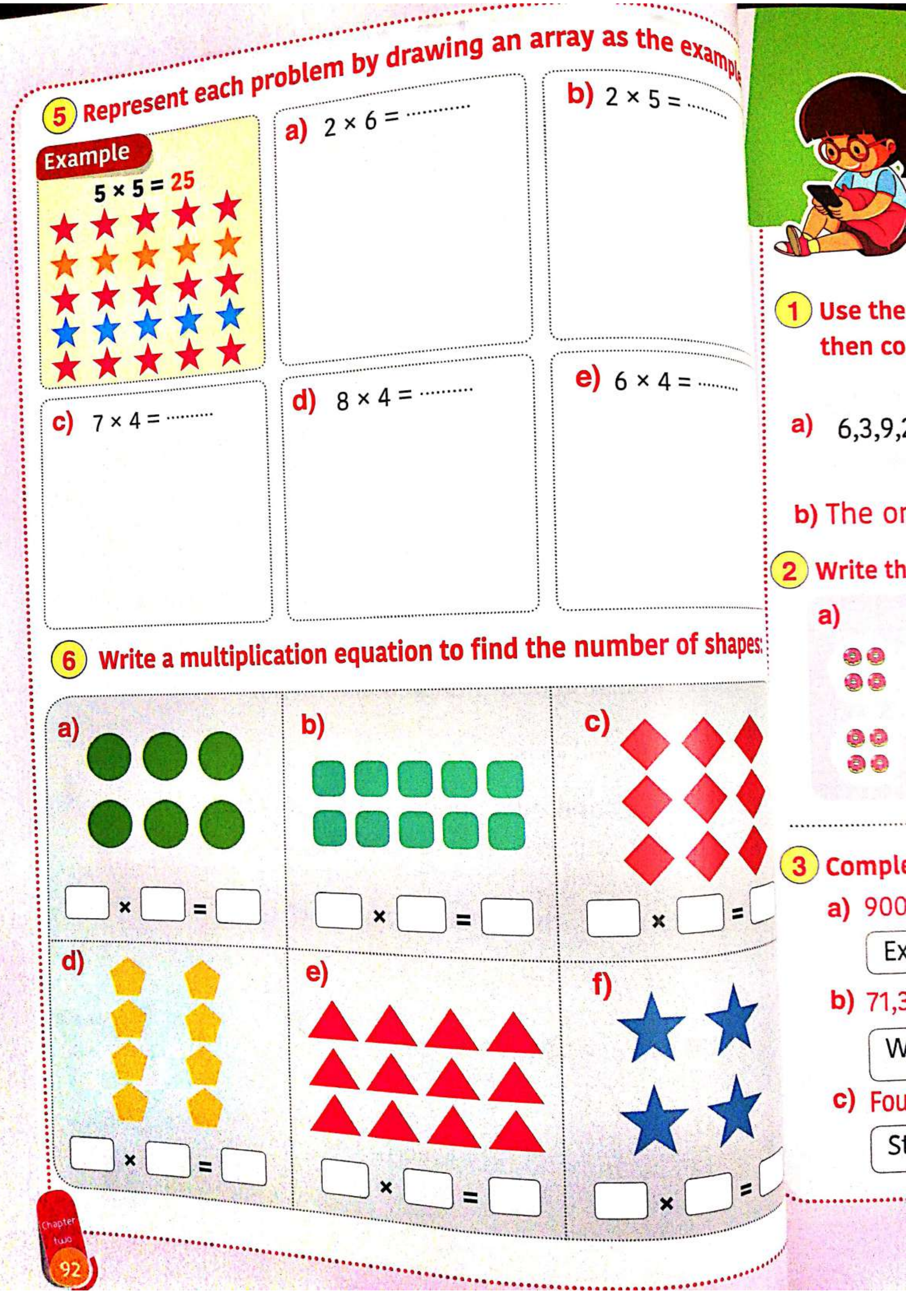
b) Seven thousand, two hundred and forty three = ...

c) Four thousand, three hundred and eighty one = ...

d) Six thousand and six = ...

e) Nine thousand and fifty seven = ...





5 Represent each problem by drawing an array as the example

Example

$5 \times 5 = 25$

a) $2 \times 6 =$ ....

b) $2 \times 5 =$ ....

c) $7 \times 4 =$ ....

d) $8 \times 4 =$ ....

e) $6 \times 4 =$ ....

6 Write a multiplication equation to find the number of shapes:

a) ☐ × ☐ = ☐

b) ☐ × ☐ = ☐

c) ☐ × ☐ = ☐

d) ☐ × ☐ = ☐

e) ☐ × ☐ = ☐

f) ☐ × ☐ = ☐

1 Use the
then co

a) 6,3,9,

b) The or

2 Write th

a)

3 Comple

a) 900

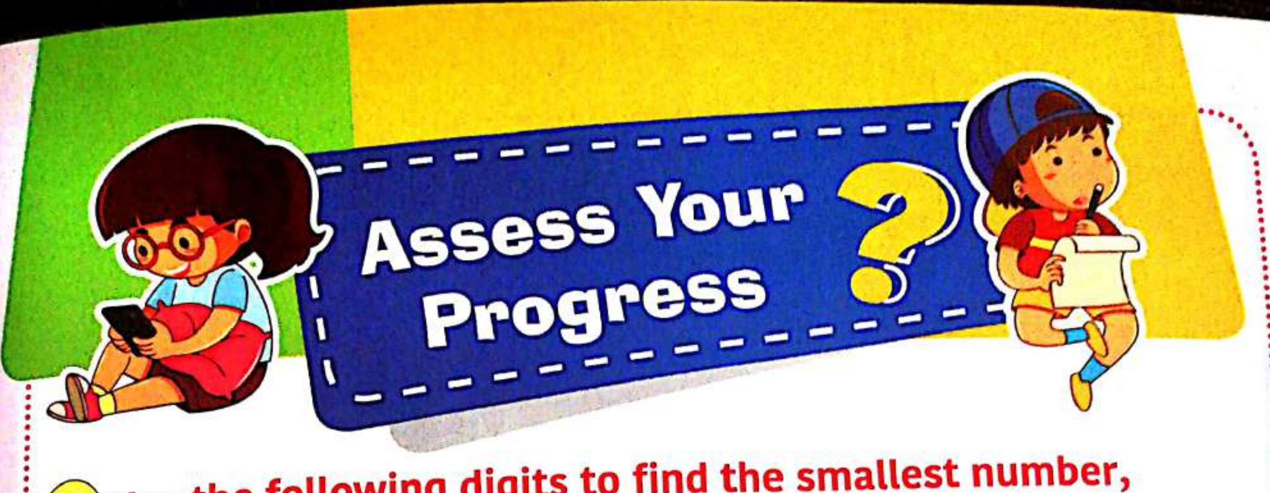
Ex

b) 71,3

W

c) Fou

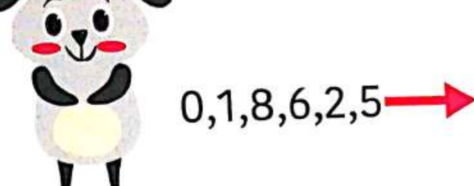
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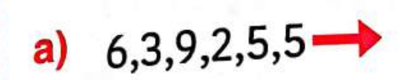




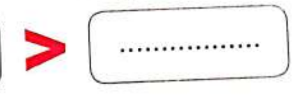
1 Use the following digits to find the smallest number, then compare:

a) 6,3,9,2,5,5 → .... 0,1,8,6,2,5 → ....



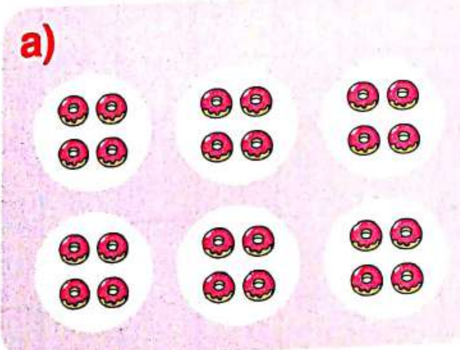


b) The order .... > ....



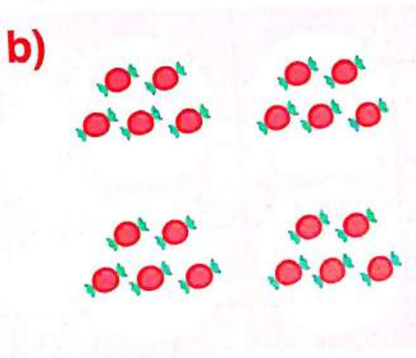
2 Write the multiplication equation that represents the following:

a)





b)



....

....

3 Complete:

a) 900,400

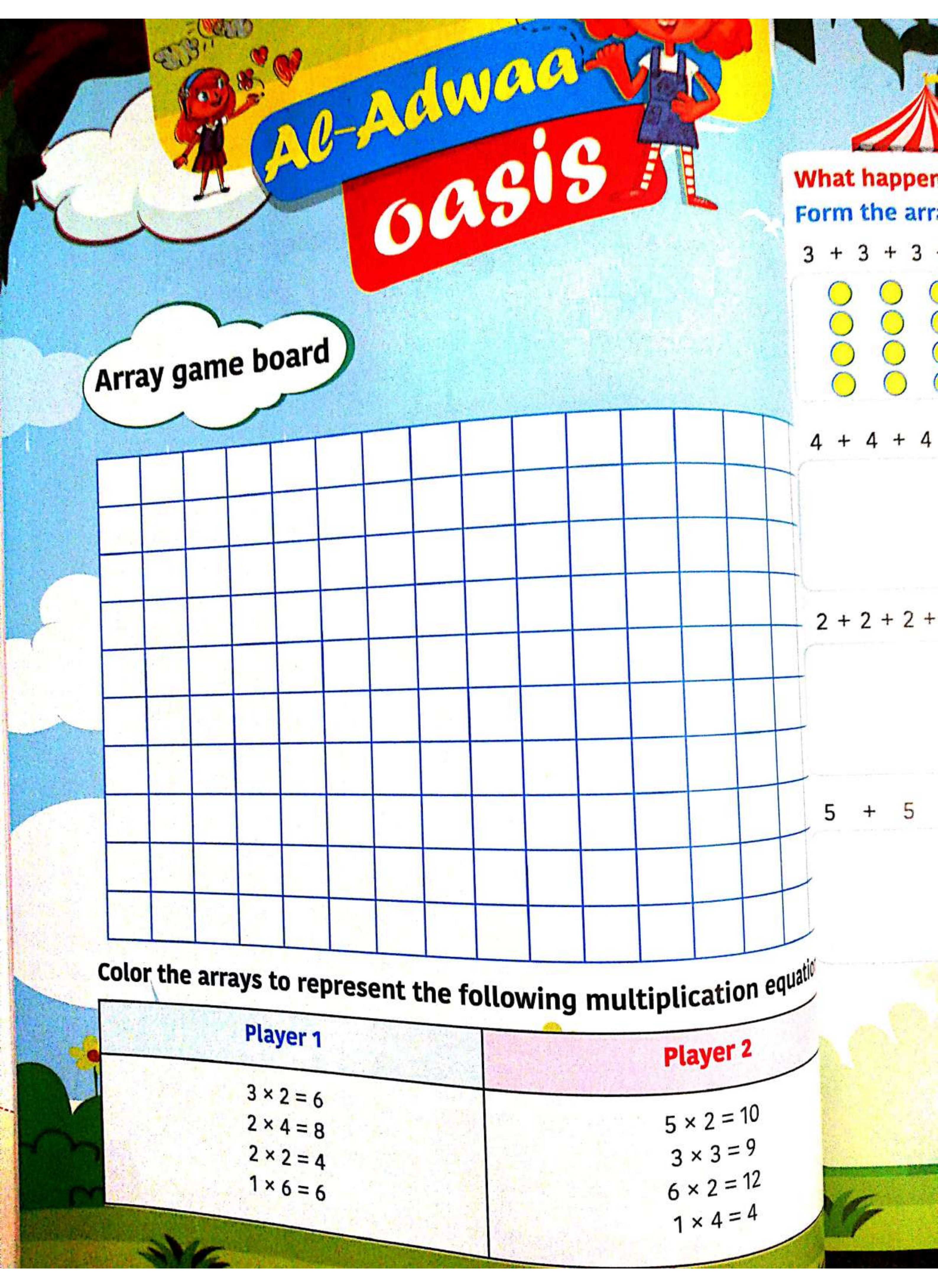
Expanded form ....

b) 71,355

Word form ....

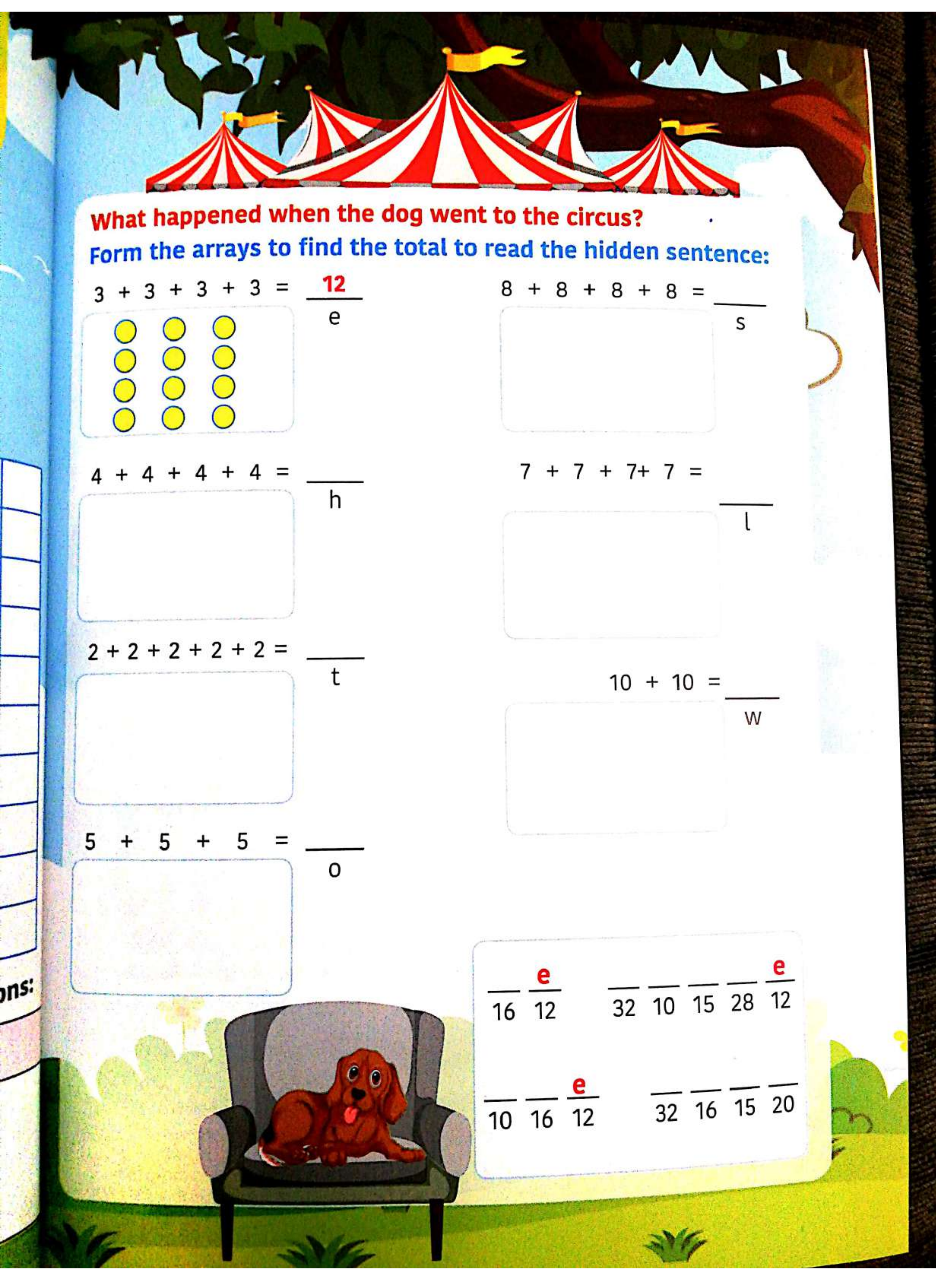
c) Four hundred thirty two thousand five hundred sixty seven

Standard form ....



Color the arrays to represent the following multiplication equatio

Player 1	Player 2
$3 \times 2 = 6$ $2 \times 4 = 8$ $2 \times 2 = 4$ $1 \times 6 = 6$	$5 \times 2 = 10$ $3 \times 3 = 9$ $6 \times 2 = 12$ $1 \times 4 = 4$



What happened when the dog went to the circus?

Form the arrays to find the total to read the hidden sentence:

3 + 3 + 3 + 3 = **12** (e)

8 + 8 + 8 + 8 = ____ (s)

4 + 4 + 4 + 4 = ____ (h)

7 + 7 + 7+ 7 = ____ (l)

2 + 2 + 2 + 2 + 2 = ____ (t)

10 + 10 = ____ (w)

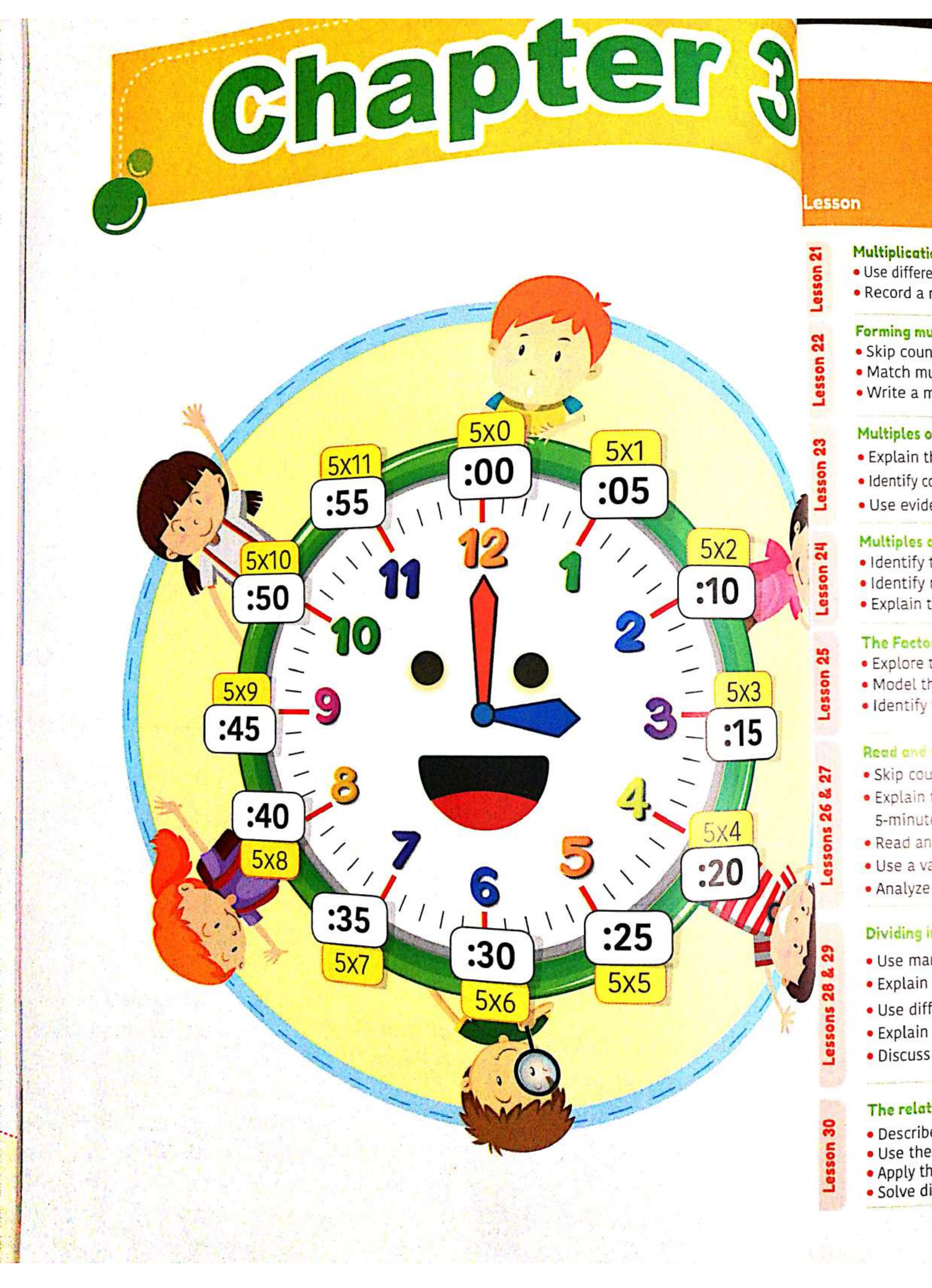
5 + 5 + 5 = ____ (o)

___ **e**
16 12

___ ___ ___ ___ **e**
32 10 15 28 12

___ ___ **e**
10 16 12

___ ___ ___ ___
32 16 15 20



Chapter 3
Lesson
Lesson 21
Lesson 22
Lesson 23
Lesson 24
Lesson 25
Lessons 26 & 27
Lessons 28 & 29
Lesson 30
5x0
:00
5x1
:05
5x2
:10
5x3
:15
5x4
:20
5x5
:25
5x6
:30
5x7
:35
5x8
:40
5x9
:45
5x10
:50
5x11
:55
12
1
2
3
4
5
6
7
8
9
10
11

Pacing Guide

Lesson	Instructional Focus	Key vocabulary
Lesson 21	**Multiplication story problems** • Use different strategies to solve multiplication story problems and explain its elements. • Record a multiplication equation to match a story problem.	• Each • Equal groups • Equation • Multiplication • Product
Lesson 22	**Forming multiplication story problems** • Skip count by 4's. • Match multiplication equations to story problems. • Write a multiplication story problem that matches a given equation.	• Multiples • Skip count
Lesson 23	**Multiples of 2 and 3** • Explain the rules for multiplying by 0 and 1. • Identify common multiples of 2 and 3 and predict the common multiples greater than 120. • Use evidence to justify and explain mathematical thinking.	• Multiples • Product • Factors
Lesson 24	**Multiples of 5 and 10** • Identify the multiples of 5 and 10. • Identify numerical patterns when multiplying by 5 and 10. • Explain the relationship between skip counting and multiplication facts.	• Equation • Factors • Pattern
Lesson 25	**The Factors** • Explore the relationship between multiples of 2, 3 and 6. • Model the commutative property of multiplication using arrays. • Identify factor pairs using arrays.	• Array • Commutative property of multiplication
Lessons 26 & 27	**Read and write digital time** • Skip count by 5's. • Explain the relationship between skip counting by 5's and telling time to 5-minute increments. • Read and write time in 5-minute increments on an analog clock. • Use a variety of strategies to tell time to 5-minute increments. • Analyze and correct an incorrect time.	• Clock • Half • Hour • Minute • Time
Lessons 28 & 29	**Dividing into equal groups** • Use manipulatives to model division. • Explain the relationship between sharing equally and dividing. • Use different strategies to solve division problems. • Explain their thinking when solving division problems. • Discuss the importance of perseverance.	• Equal • Divide • Fair share • Model
Lesson 30	**The relation between multiplication and division** • Describe the relationship between factors and their product. • Use the division symbol. • Apply the relationship between multiplication and division to identify fact families. • Solve division problems with one unknown.	• Division • Fact family • Symbol



Multiplication story problems

How can we solve multiplication story problems?

May collects 5 kilograms of strawberries every day, how many kg of strawberries did she collect per one week?

Repeated addition strategy:

$5 + 5 + 5 + 5 + 5 + 5 + 5 = 35$

7 groups of **5**

Multiplication strategy:

$7 \times 5 = 35$

Seven times five equals thirty five.

Ahmed went to a store, he saw three teddy bears on the shelf with 4 red buttons in each.

How many buttons are there in all the teddy bears?

3 groups of **4**

Multiplication strategy:

$3 \times 4 = 12$

Three times four equals twelve.



Remember

- The result of multiplication is called product $2 \times 3 = 6$



Daily Practice:

Help your child read the story problems carefully to figure out when to add and when to multip



Activ

At school
students,

The tota

= 5

= 2



Mazen

the tot

in a we

X

Parents' T
- Guide yo
using di



Read and solve:

At school the students were standing in two rows each row has 5 students, how many students are there?

The total number of students

= ...5... + ...5... = ...10... students

= ...2... × ...5... = ...10... students



Activity 2

Read and solve:

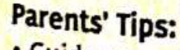
Mazen runs 2 miles each day. How many miles does he run in a week?

the total number of miles

in a week = ... + ... + ... + ... + ... + ... + ... =

.... x .... = ... miles



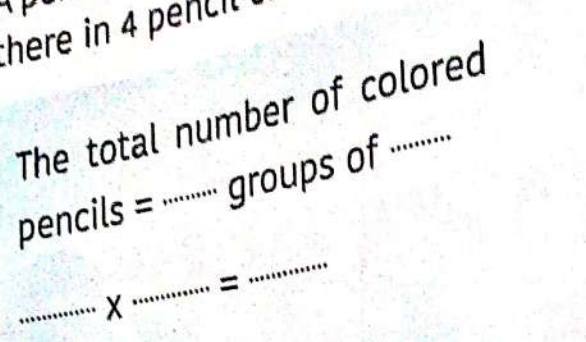


Parents' Tips:

- Guide your child when solving the problems and show him/her how he/she would solve them using different strategies.

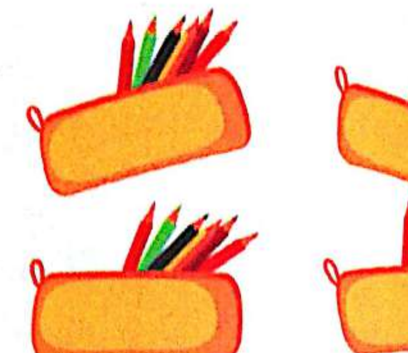
Activity 3 Read and solve:

A pencil case contains 6 colored pencils. How many colored pencils there in 4 pencil cases?



The total number of colored pencils = ... groups of ....

.... x .... = ...





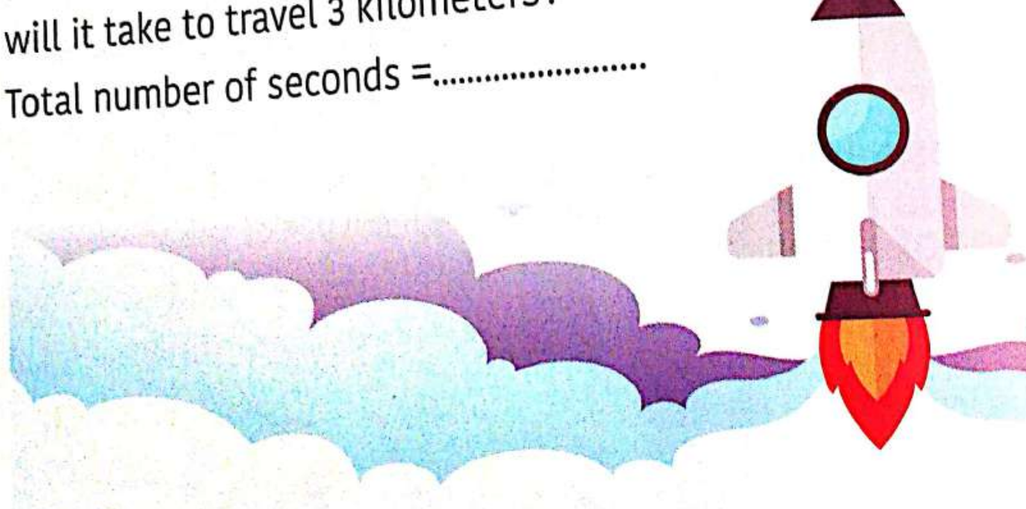
How to write the



Activity 4 Read and solve:

It takes a rocket 8 seconds to travel one kilometer. How many seco will it take to travel 3 kilometers?

Total number of seconds =........................





There are 4

Then the tot

Activity

Alaa packe

each one

Then the

is ....



I learned

- Solving multiplication story problems and explain their elements.
- Recording a multiplication equation to match a story problem.

Daily Practice:
Record with you
him/her compar





Forming multiplication story problems

How to write the story problem of a multiplication equation:

$4 \times 3 = 12$






There are **4 groups** of dogs, each one has **3 dogs**

Then the total number of dogs **equals 12** dogs.

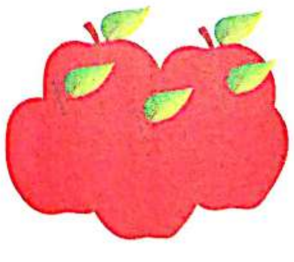
Activity 1 Form the multiplication equation of the problem:

Alaa packed apples into .... groups,

each one has .... apples.

Then the multiplication equation

is .... × .... = ...



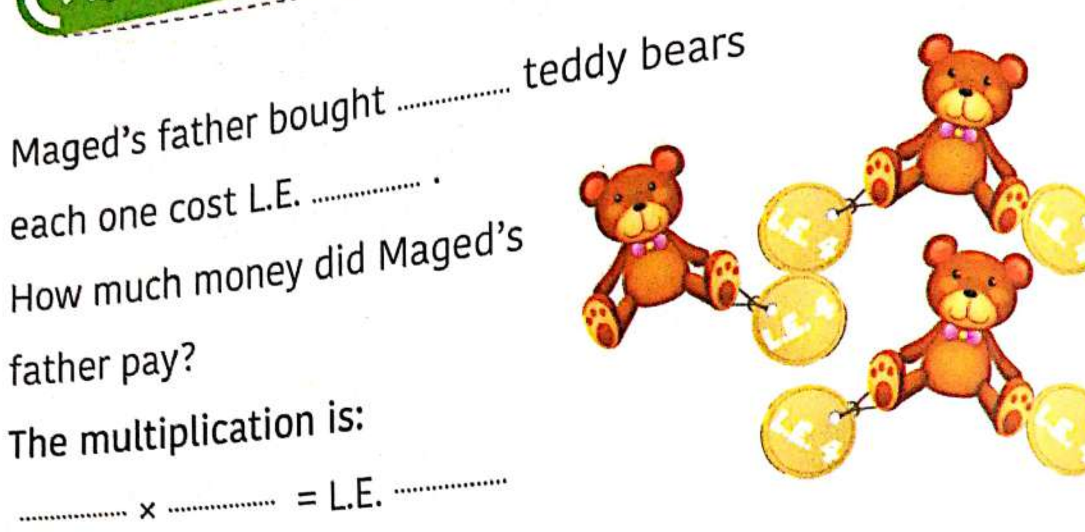

Daily Practice:

Record with your child the numbers he/she gets when skip counting by 4's, then let him/her compare the multiples of 2 and 4.





Activity 2 Complete the story problem:



Maged's father bought .... teddy bears each one cost L.E. .... How much money did Maged's father pay?

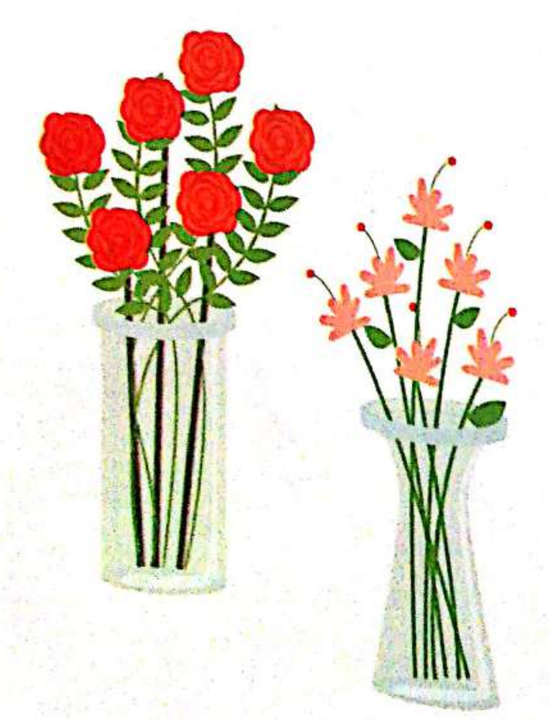
The multiplication is:

.... × .... = L.E. ....

Activity 3 Read and solve:

Calculate the number of flowers in all vases.

The multiplication equation is: .... × .... = ... flowers.







Activity

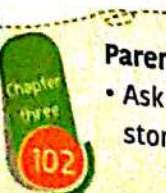
Activi

a) Ahmed
has 7 ba
there in

b) Tony b
each. H

c) Amir w
How m

• Matchi
• Writing



Parents' Tips:

• Ask your child to try something even more challenging by letting him/her write his/her story problem and share it with a friend to ...



Draw using the following items (balls and boxes), then write a story problem for the given multiplication equation:

$4 \times 5 = 20$





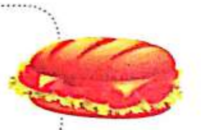

Read and match:

a) Ahmed has 4 boxes of chocolate; each box has 7 bars. How many bars of chocolate are there in all the boxes?



$5 \times 7 = 35$

b) Tony bought 6 sandwiches of L.E. 5. each. How much money did Tony pay?



$4 \times 7 = 28$



c) Amir walks on the track 7 times a day. How many times does he walk in 5 days?

$6 \times 5 = 30$



I learned

- Matching multiplication equations to story problems.
- Writing a multiplication story problem.



Lesson 23

Multiples of 2 and 3

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Multiples of 2 means we skip counting by 2 (2, 4, 6, 8, ...)



Multiples of 3 means we skip counting by 3 (3, 6, 9, ...



We notice that:

the numbers which are colored in both pink and blue are multiples of 2 and multiples of 3.
So, these numbers are called common multiples (6, 12, 18, ...).

Multiplication facts

First

2 × 0 = 0 because we have 2 group of 0
3 × 0 = 0
218 × 0 = 0
So, any number multiplied by zero equals zero.

Notice that:
Zero is a common multiple of all numbers.

Second

2 × 1 = 2 because we have 2 group of 1
3 × 1 = 3
1638 × 1 = 1638
So, any number multiplied by 1 equal the same number.



Daily Practice:
Solve with your child some examples to ensure that he/she understands that no calcul... needed when multiplying by 0 or 1.

We can represent skip c...

Multiples of 2
2 × 0 = 0
2 × 1 = 2
2 × 2 = 4
2 × 3 = 6
2 × 4 = 8
2 × 5 = 10
2 × 6 = 12
2 × 7 = 14
2 × 8 = 16
2 × 9 = 18
2 × 10 = 20

Activity 1

a) 9 × 1 = ...
c) 2 × 0 = ...
e) 7 × 3 = ...
g) 3 × 2 = ...
i) 3 × 10 = ...



Activity 2

a) 3 × 5 = 15
Factors are: ....
Product = ...

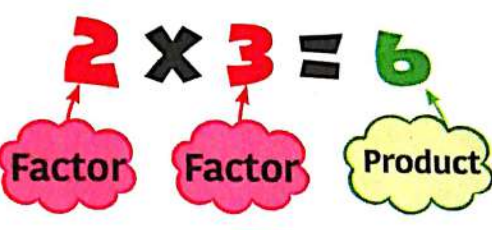


Parents' Tips:
• Help your child figu...

We can represent skip counting by 2 and 3 as a multiplication equation:

Multiples of 2

$2 \times 0 = 0$
$2 \times 1 = 2$
$2 \times 2 = 4$
$2 \times 3 = 6$
$2 \times 4 = 8$
$2 \times 5 = 10$
$2 \times 6 = 12$
$2 \times 7 = 14$
$2 \times 8 = 16$
$2 \times 9 = 18$
$2 \times 10 = 20$



Multiples of 3

$3 \times 0 = 0$
$3 \times 1 = 3$
$3 \times 2 = 6$
$3 \times 3 = 9$
$3 \times 4 = 12$
$3 \times 5 = 15$
$3 \times 6 = 18$
$3 \times 7 = 21$
$3 \times 8 = 24$
$3 \times 9 = 27$
$3 \times 10 = 30$

Activity 1

Complete the multiplication equations to find the product:

a) $9 \times 1 =$ ....
b) $0 \times 20000 =$ ....
c) $2 \times 0 =$ ....
d) $1 \times 17 =$ ....
e) $7 \times 3 =$ ....
f) $5 \times 2 =$ ....
g) $3 \times 2 =$ ....
h) $2 \times 3 =$ ....
i) $3 \times 10 =$ ....
j) $2 \times 10 =$ ....



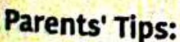
Activity 2

Find the factors and the product of each of the following equations:

a) $3 \times 5 = 15$
Factors are: .... , ...
Product = ...

b) $2 \times 8 = 16$
Factors are: .... , ...
Product = ...

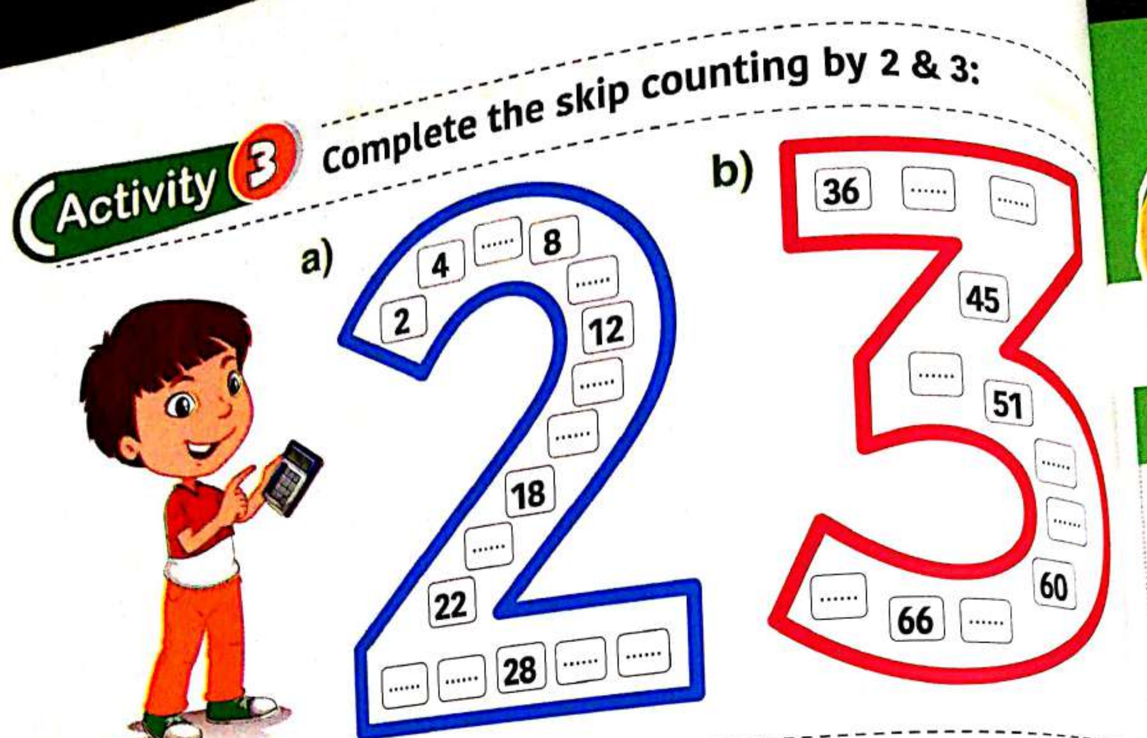
c) $3 \times 4 = 12$
Factors are: .... , ...
Product = ...



Parents' Tips:
- Help your child figure out the common multiples between 2 and 3.



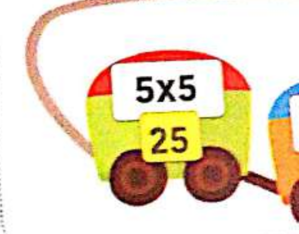
Activity 3 Complete the skip counting by 2 & 3:





Skip counting by





Activity 4 Color the multiples of 2 and multiples of 3 o the 120 chart, then write the first ten of them:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

a) List the first 10 multiples



....

....

b) List the first 10 multiples

....

....

Skip counting





I learned

- Understanding the multiplication facts.
- Identifying numerical patterns when multiplying by 2 and 3.

The multiples

The multiples

The common

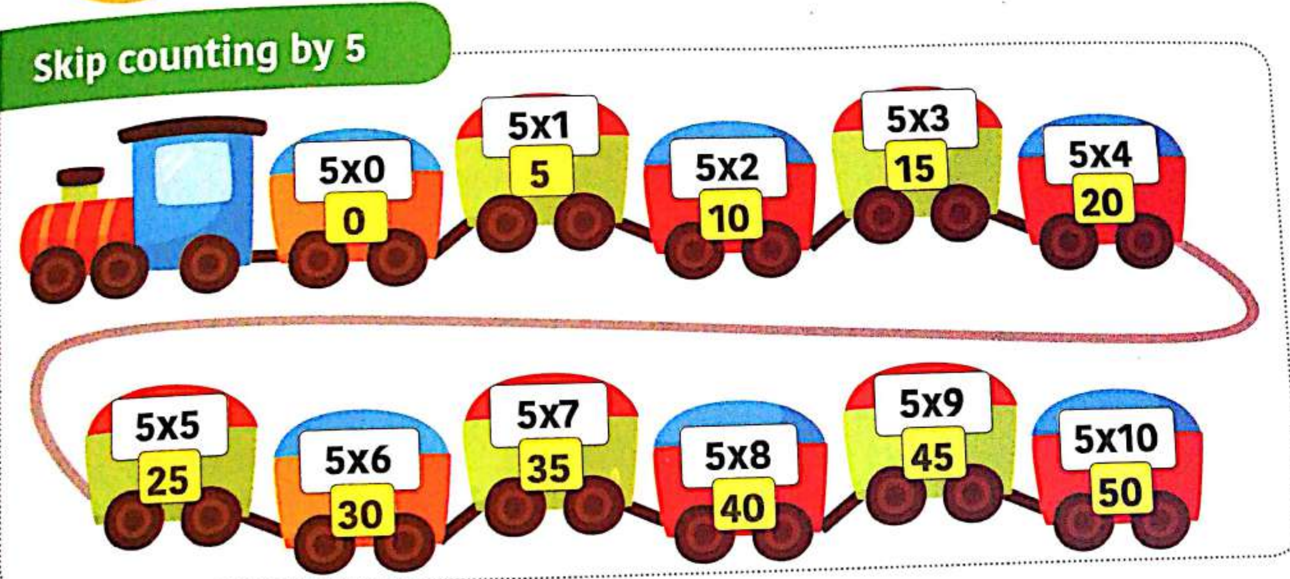
Daily Practice:
Practice with your
column in the righ



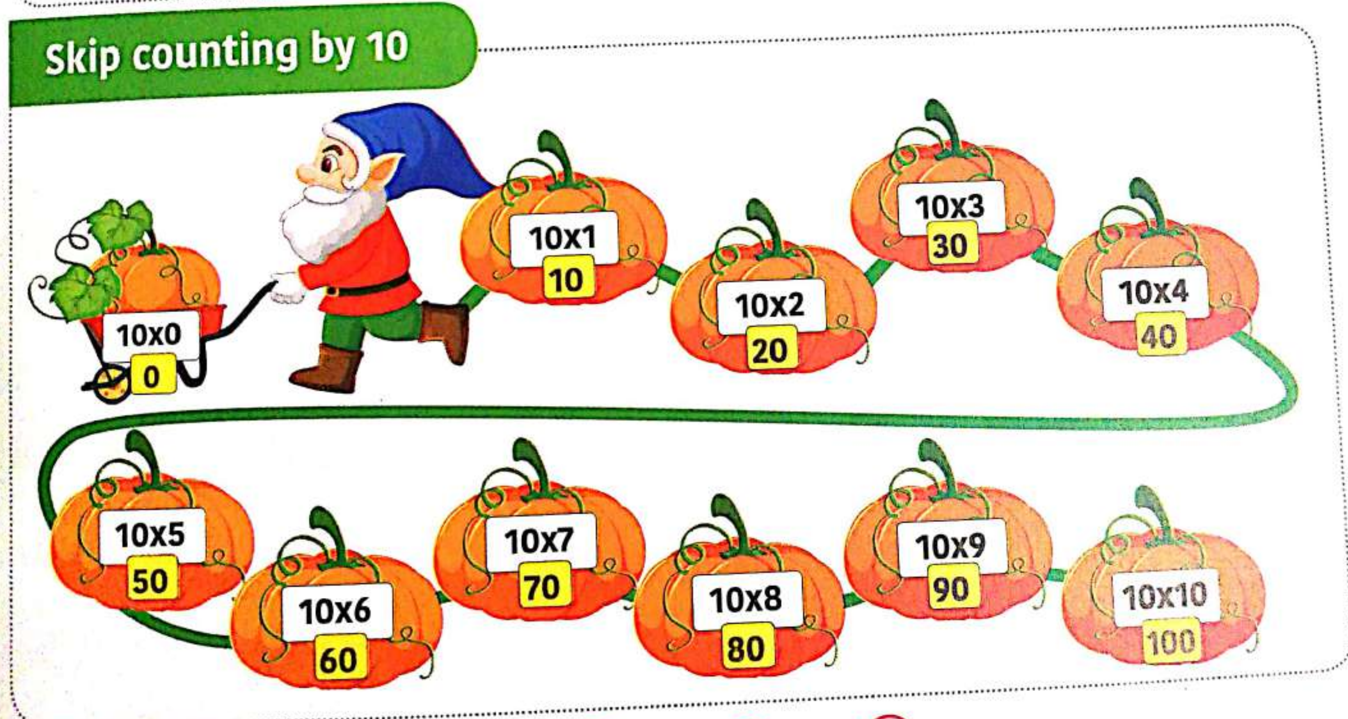


Multiples of 5 and 10

Skip counting by 5



Skip counting by 10



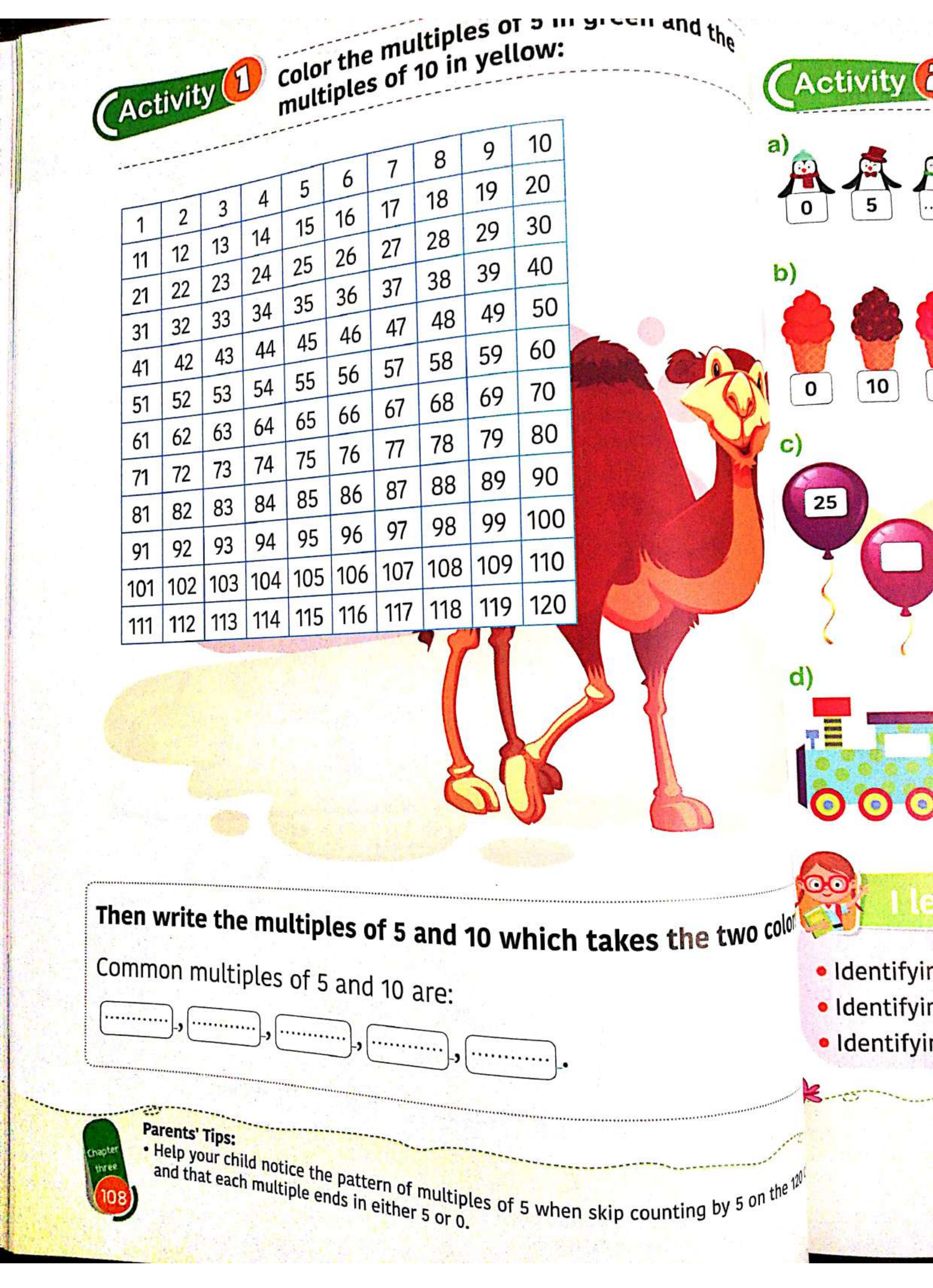
The multiples of 5 are: 0, 5, 10, 15, 20, 25, 30 ....

The multiples of 10 are: 0, 10, 20, 30 , ...

The common multiples of both 5 and 10 are: 0, 10, 20, 30, 40, ...

Daily Practice:
Practice with your child the skip counting by 10's on the 120-chart which appears in one column in the right side that ends in a 0.





Activity 1

Color the multiples of 5 in green and the multiples of 10 in yellow:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Then write the multiples of 5 and 10 which takes the two color

Common multiples of 5 and 10 are:

............, ..., ..., ..., ...

Parents' Tips:

- Help your child notice the pattern of multiples of 5 when skip counting by 5 on the 120 and that each multiple ends in either 5 or 0.

Activity

a) 0 5 ...

b) 0 10

c) 25

d)

I le

- Identifyin
- Identifyin
- Identifyin

Activity 2 Write the missing multiples:

a)



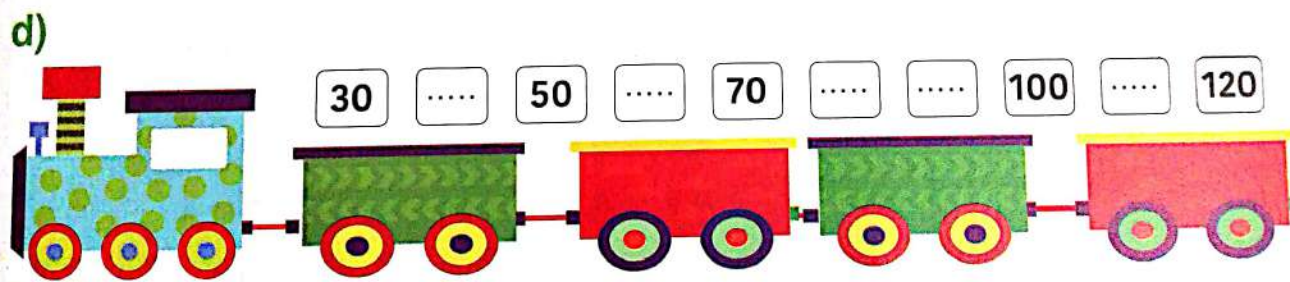
b)



c)



d)



I learned

- Identifying the multiples of 5 and 10.
- Identifying numerical patterns when multiplying by 5 and 10.
- Identifying common multiples of 5 and 10.







The Factors

How can we find the factors of a number?





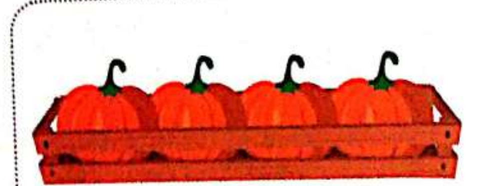
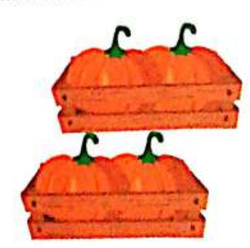
6 x 1 = 6
Factors are 6 & 1
Product is **6**

2 × 3 = 6
Factors are 2 & 3
Product is **6**

3 × 2 = 6
Factors are 3 & 2
Product is **6**

1 × 6 = 6
Factors are 1 &
Product is 6

So, the factors of 6 are 1, 6, 2 and 3.


1 × 4 = 4
Factors are 1 & 4
Product is **4**

2 × 2 = 4
Factors are 2 & 2
Product is **4**

4 × 1 = 4
Factors are 4 &
Product is 4

So, the factors of 4 are 1 , 2 and 4
We don't take the repeated factors.

2 × 3 = 6 , 3 × 2 = 6
is called a **commutative property.**



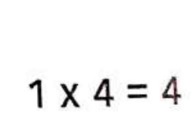




1 × 8 = 8

So, the factors of





1 x 4 = 4

So, the factors

Daily Practice:
Help your child explore the relationship between multiples of 2, 3, and 6.

Parents' Tips:
Ensure that when you



Activity 1 Find the factors of 8 by drawing arrays of ✖ to represent them:

✖✖✖✖✖✖✖✖	✖✖✖✖ ✖✖✖✖	✖✖ ✖✖ ✖✖ ✖✖	✖ ✖ ✖ ✖ ✖ ✖ ✖ ✖
$1 \times 8 = 8$	$2 \times 4 = 8$	...... × ...... = ...	...... × ...... = ...

So, the factors of number 8 are .... , ... , ... , and ....



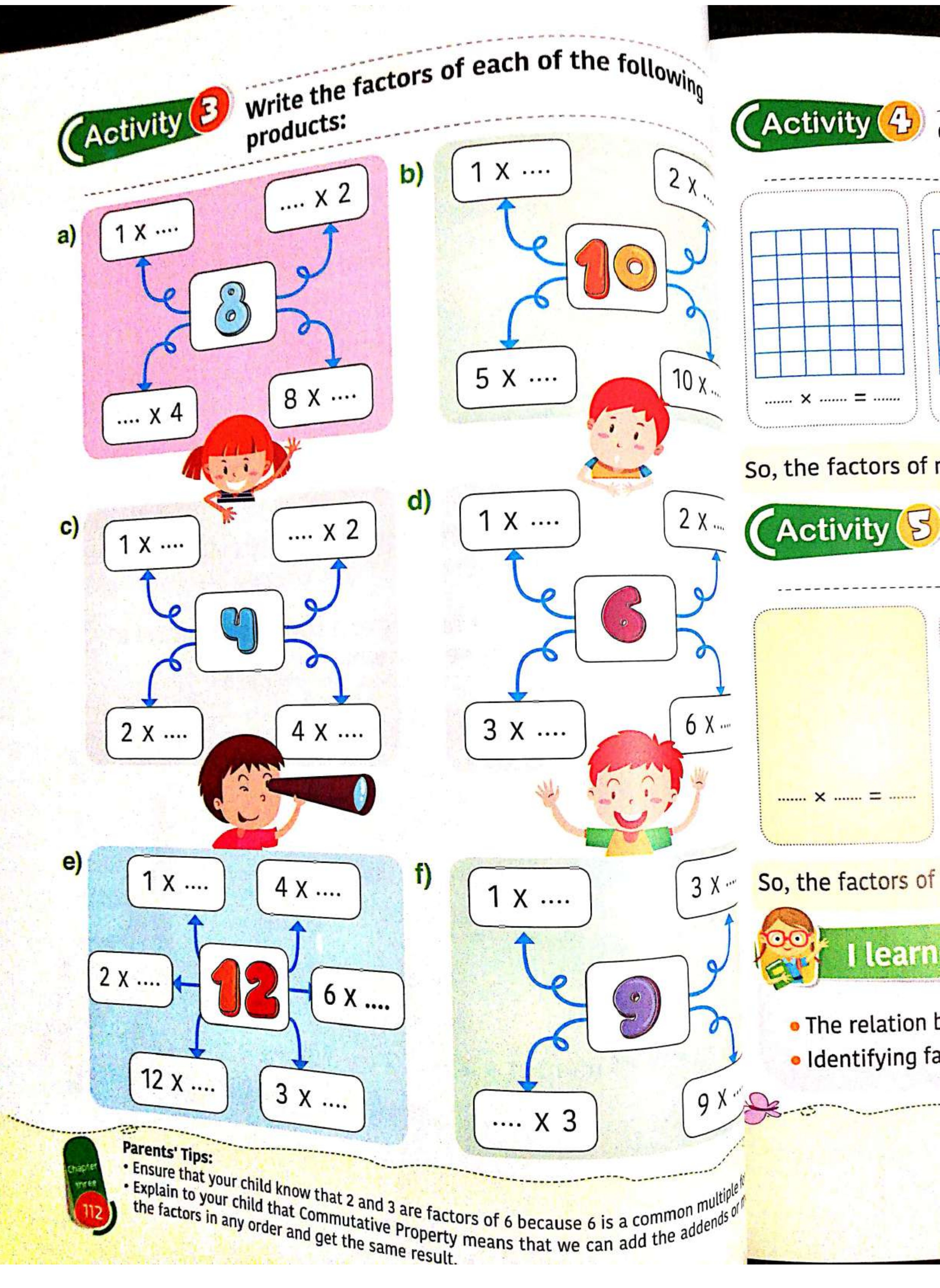
Activity 2 Find the factors of 4 by drawing arrays of ◯ to represent them:

$1 \times 4 = 4$	...... × ...... = ...	...... × ...... = ...

So, the factors of number 4 are .... , ... and ....

Parents' Tips:

- Ensure that when your child find the factors he/she doesn't take the repeated factors.



Activity 3 Write the factors of each of the following products:

a) 8

1 x ....
.... x 2
.... x 4
8 x ....

b) 10

1 x ....
2 x ...
5 x ....
10 x ...

c) 4

1 x ....
.... x 2
2 x ....
4 x ....

d) 6

1 x ....
2 x ...
3 x ....
6 x ...

e) 12

1 x ....
4 x ....
2 x ....
6 x ....
12 x ....
3 x ....

f) 9

1 x ....
3 x ...
.... x 3
9 x ...

Activity 4

.... × .... = ...

So, the factors of r

Activity 5

.... × .... = ...

So, the factors of

I learn

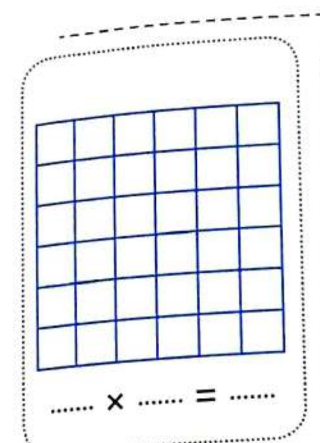
- The relation b
- Identifying fa

Parents' Tips:

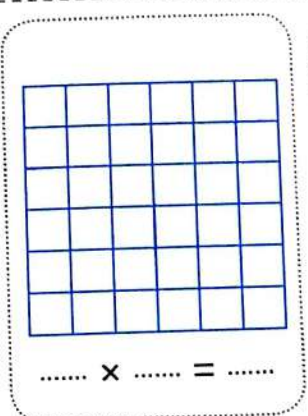
- Ensure that your child know that 2 and 3 are factors of 6 because 6 is a common multiple f
- Explain to your child that Commutative Property means that we can add the addends or m the factors in any order and get the same result.



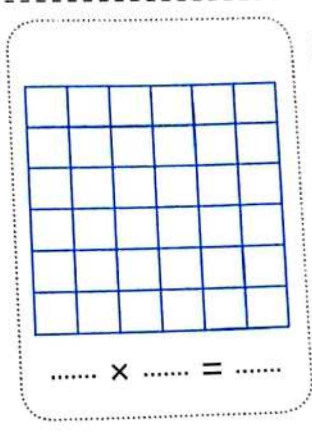
Color the factors of 6 by drawing arrays to represent them:



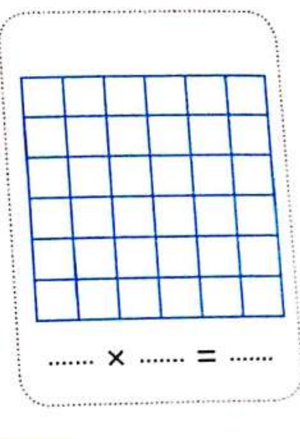
.... × .... = ...



.... × .... = ...



.... × .... = ...

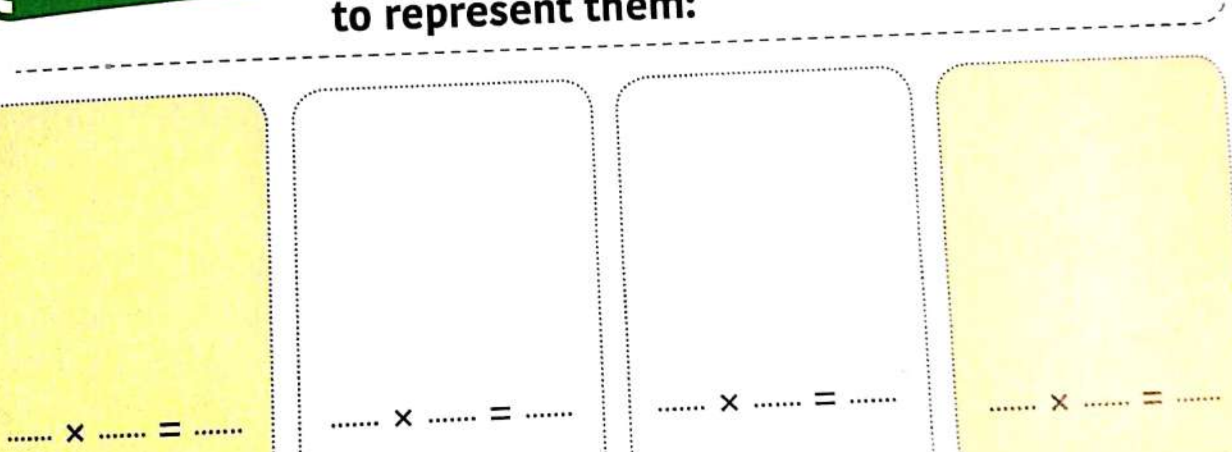


.... × .... = ...

So, the factors of number 6 are .... , ... , ... and ....



Find the factors of 10 by drawing arrays of to represent them:



.... × .... = ...

.... × .... = ...

.... × .... = ...

.... × .... = ...

So, the factors of number 10 are .... , ... , ... and ....



I learned

- The relation between multiples of 2,3 and 6.
- Identifying factor pairs using arrays.



Read and write digital tim

Lessons 26&27

Reading the clock



It is 4 o'clock.





It is a quarter after 4.

4 15





It is half past





It is a quarter to 4.





It is 5 o'clock.





15 minutes



30 minutes



45 minutes



60 minutes

Daily Practice:
Help your child remember how to tell time to the hour or half an hour and time to the qu... hours (before and after), and tell him/her that 1 hour consists of 60 minutes, and half an h... consists of 30 minutes.



The parts o

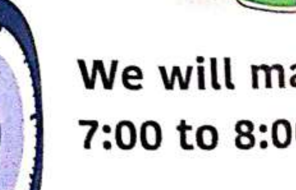
Hour hand
The short hand

Minute hand
The long hand

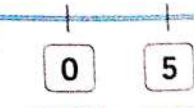
- The minute h
5 minutes ea

Remember
Multiples of 5
(0, 5, 10, 15, 20, 35

- When the h
minutes it r



We will ma
7:00 to 8:0



Parents' Tips:
- Explain to your

The parts of the clock:

Hour hand

The short hand refers to hours.

Minute hand

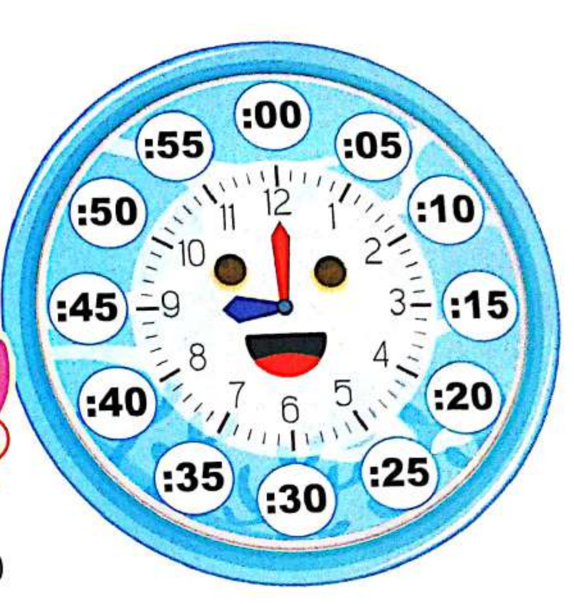
The long hand refers to minutes.

- The minute hand points by jumping 5 minutes each time.

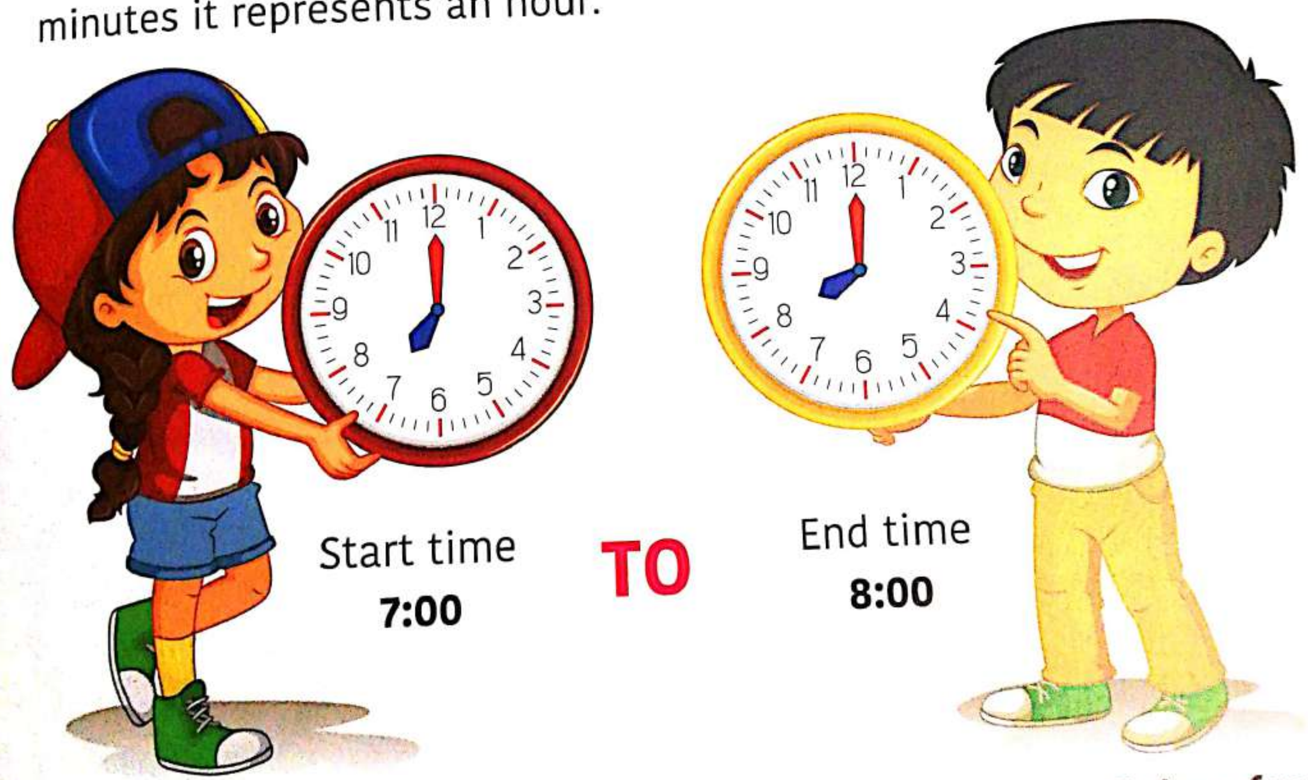
Remember

Multiples of 5

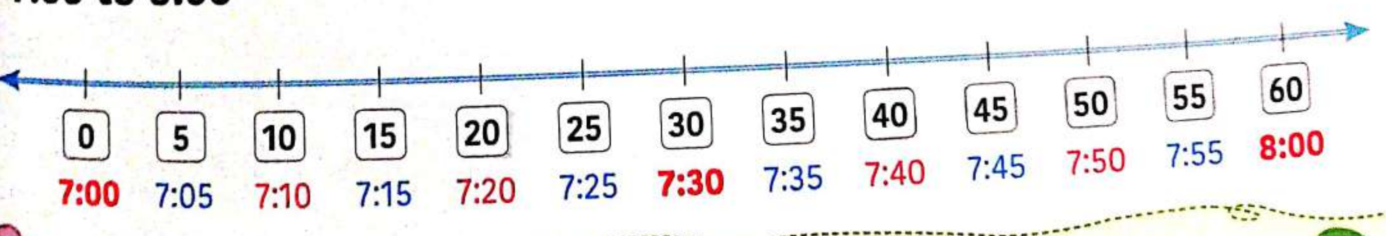
(0, 5, 10, 15, 20, 35, 30, 35, 40, 45, 50, 55, 60)



- When the hand passes the whole 60 minutes it represents an hour.

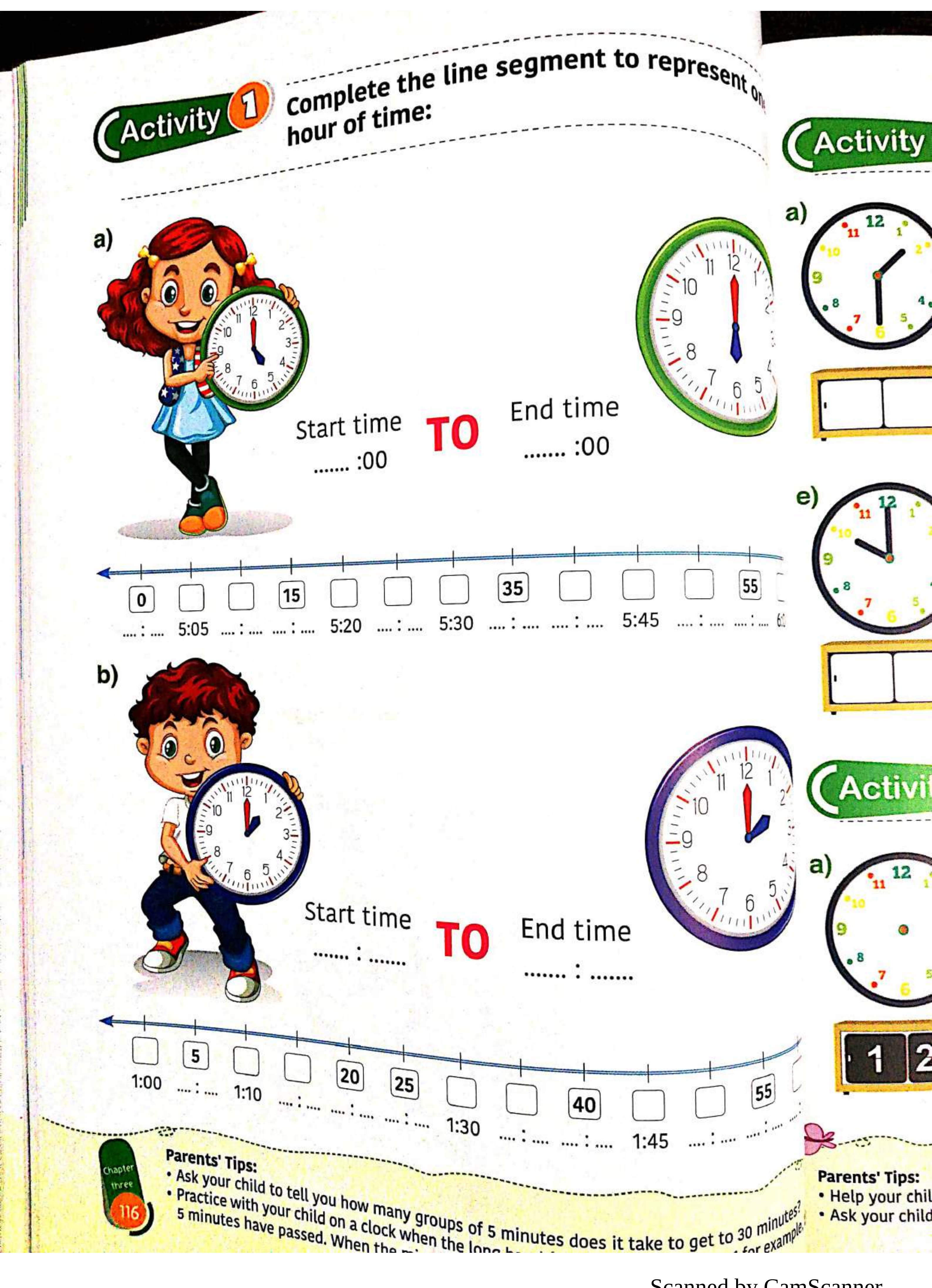


We will make a line segment to represent one hour of time from 7:00 to 8:00



Parents' Tips:

- Explain to your child that there are in one hour 12 groups of 5 minutes, for a total of 60 minutes.



Activity 1

Complete the line segment to represent one hour of time:

a)

Start time ……. :00 **TO** End time ……. :00

0	☐	☐	15	☐	☐	☐	35	☐	☐	☐	55	☐
…. : ….	5:05	…. : ….	…. : ….	5:20	…. : ….	5:30	…. : ….	…. : ….	5:45	…. : ….	…. : ….	6:…

b)

Start time ……. : ……. **TO** End time ……. : …….

☐	5	☐	☐	20	25	☐	☐	40	☐	☐	55	☐
1:00	…. : ….	1:10	…. : ….	…. : ….	…. : ….	1:30	…. : ….	…. : ….	1:45	…. : ….	…. : ….	…

Parents' Tips:

- Ask your child to tell you how many groups of 5 minutes does it take to get to 30 minutes?
- Practice with your child on a clock when the long hand … for example 5 minutes have passed. When the m…

Activity

a)

e)

Activity

a)

Parents' Tips:

- Help your chil…
- Ask your child…

Activity 2 Write the digital time for the following clocks:

a)

b)

c)

d)

e)

f)

g)

h)

Activity 3 Draw the two hands of the clock to show the time:

a) 1 20

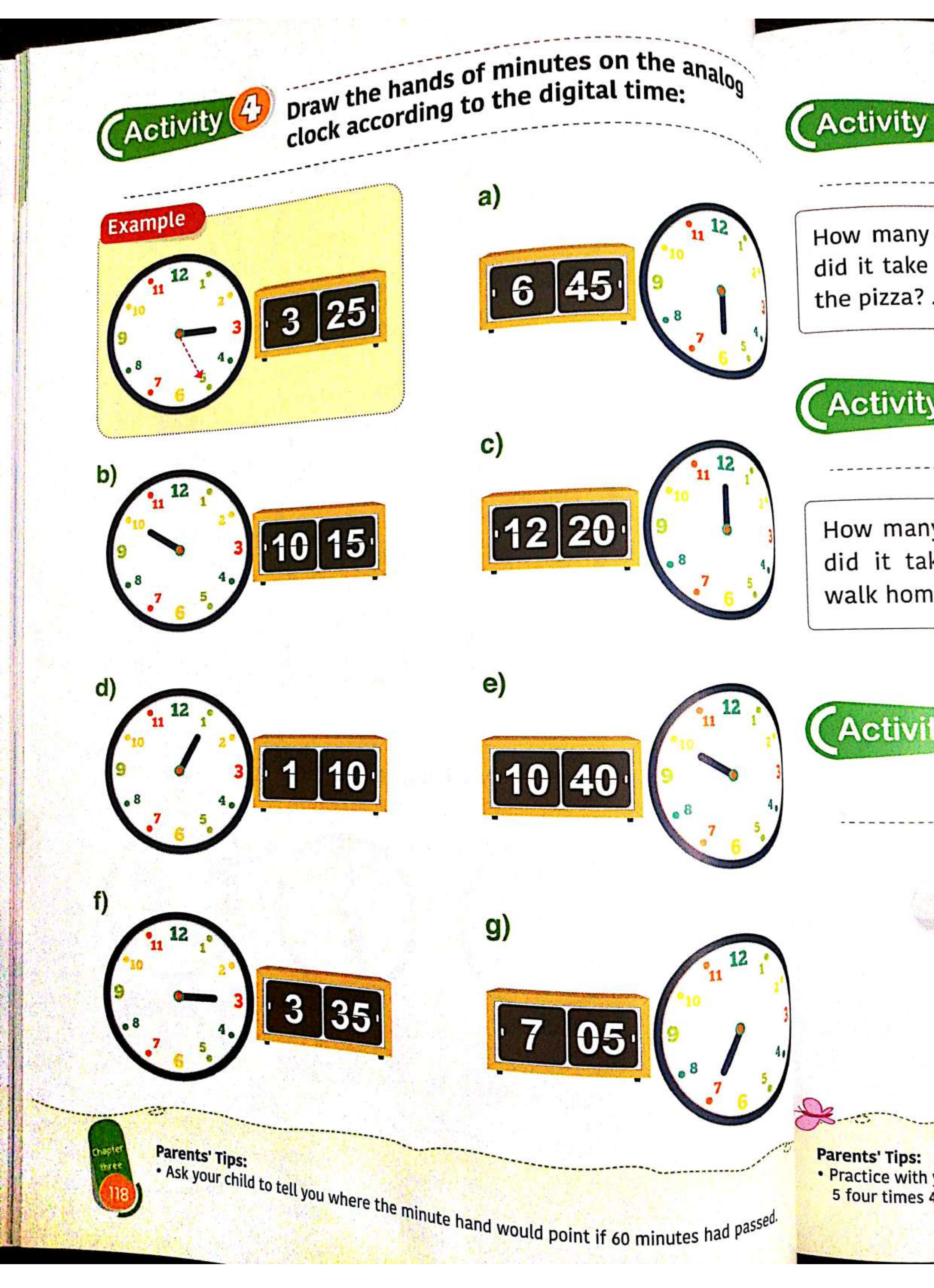
b) 8 15

c) 3 45

d) 11 30

Parents' Tips:

- Help your child read and record the given time.
- Ask your child to tell you how many groups of 5 minutes does it take to get to 30 minutes?


Activity 4
Draw the hands of minutes on the analog clock according to the digital time:
Example
3 25
a)
6 45
b)
10 15
c)
12 20
d)
1 10
e)
10 40
f)
3 35
g)
7 05
Activity
How many
did it take
the pizza?
Activity
How many
did it tak
walk hom
Activit
Parents' Tips:
• Ask your child to tell you where the minute hand would point if 60 minutes had passed.
Chapter three
118
Parents' Tips:
• Practice with
5 four times



Your mom puts pizza in the oven at 10:00 o'clock when you take it out, the clock looks like this:

How many minutes did it take to finish the pizza? ....





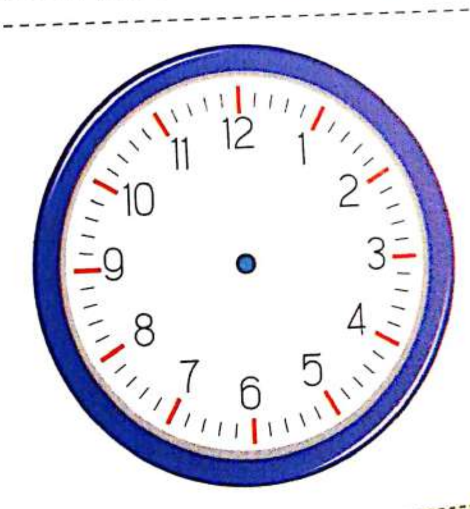

You leave school at 2:00 o'clock and when you get home the clock looks like this:

How many minutes did it take you to walk home? ....





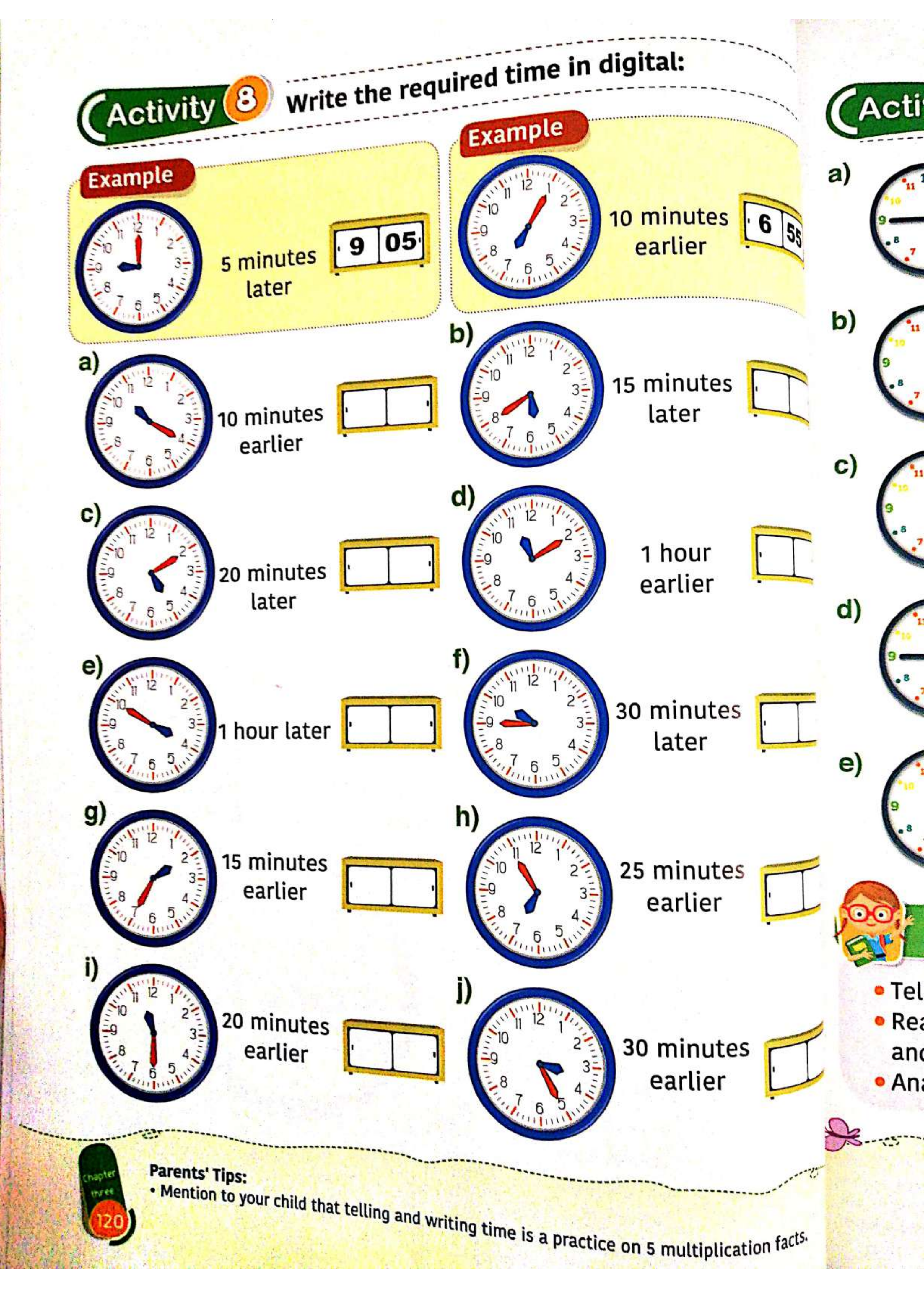

Amina started cooking a duck at 1:05 o'clock, it must be cooked for 3 hours. Draw the 2 hands of the clock to show when it will be finished.

Parents' Tips:

- Practice with your child that if the minutes hand is pointing at 4, he/she skips counting 5 four times $4 \times 5 = 20$, so 20 minutes have passed.





Activity 8 Write the required time in digital:

Example

5 minutes later — 9 05

Example

10 minutes earlier — 6 55

a) 10 minutes earlier

b) 15 minutes later

c) 20 minutes later

d) 1 hour earlier

e) 1 hour later

f) 30 minutes later

g) 15 minutes earlier

h) 25 minutes earlier

i) 20 minutes earlier

j) 30 minutes earlier

Parents' Tips:

- Mention to your child that telling and writing time is a practice on 5 multiplication facts.



Match each analog clock with its digital time:

a) 

b) 

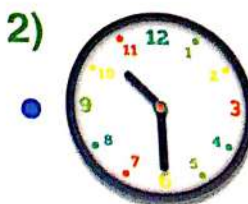
c) 

d) 

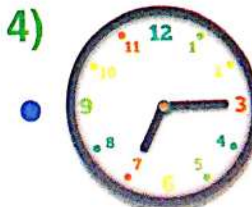
e) 

7 : 15
2 : 30
11 : 45
1 : 15
5 : 30
12 : 45
4 : 00
6 : 15
10 : 30
3 : 45

1) 

2) 

3) 

4) 

5) 



I learned

- Telling time to 5-minute increments.
- Reading & writing time in 5-minute on an analog clock and digital clock.
- Analyzing and correcting an incorrect time.

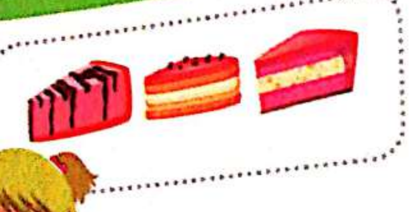






Dividing into equal grou

How can we share equally?



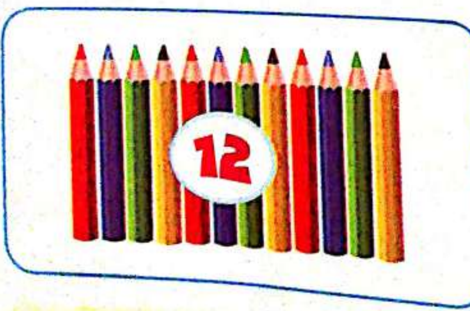
We have 6 pieces of gateaux and we want to share them equally between 2 children.

The equation can be written as 

Zero left over (remainder)

If six pieces of gateaux are divided into 2 equal groups, we get 3 pieces for each child.

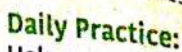
Activity 1 We need to divide 12 colored pencils equally among 3 pencil cases:







Each group consists of .... pencils, because $12 \div 3 =$ ....



Daily Practice:
Help your child find the equal shares if I bought a package of 12 cookies at the store. I wanted to ... them equally with a friend. How many cookies should ... get? Let him/her re... the answer using a variety of strat... manipulat... mental math





Each box conta...

The mathemat...





How many sar...

The division e...

Activity



Then write ...

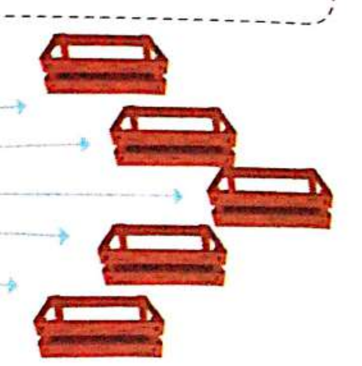
The divisio...

Parents' Tips:
- Explain to your c... equal groups bec... an equal amount...



Divide 15 apples equally among 5 boxes and draw to show your answer:





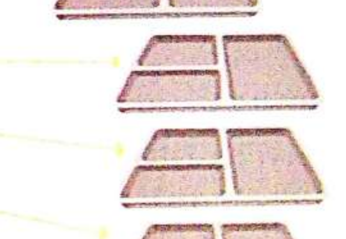
Each box contains [.........] apples.

The mathematical equation is: 15 ÷ 5 = [.........]



Hager prepared 20 sandwiches to share them equally among her 4 friends, draw to show your answer:





How many sandwiches does each one take? [.........]

The division equation is: [.........] ÷ [.........] = [.........]



Samy has 10 oranges which he needs to divide equally among 5 baskets, draw the oranges to show the equal shares:

Then write the division equation for this problem.

The division equation is: [.........] ÷ [.........] = [.........]

Parents' Tips:

- Explain to your child that in sharing problems, we take a number and divide it into smaller equal groups because we want to make sure that everyone in the group gets a fair share, or an equal amount.



Dividing with a remainder

We have 14 balloons, we need to share them equally among Nesreen, Rania and Magda. How many balloons each one will have? How many balloons are left?

When we share the balloons equally we find out that we have 2 balloons are left over. We cannot share them on the 3 friends.

- The division equation is:

14 ÷ 3 = 4 and 2 balloons are leftover (remainder)

Activity 5

Cats like to eat fish, each cat eats 2 fishes. If we have 9 fishes. How many cats can we feed?

- How many cats can we feed? [..........] cats.

The division equation is: [..........] ÷ [..........] = [..........] remainder [..........]

Parents' Tips:

- Explain to your child when we share the balloons we find out that we have 2 balloons are left over and we cannot share them on the 3 friends.
- Explain to your child that when we form a divisi... ...uld start with the number or the number that ...



A teacher has 24 balls which he needs to divide among his 6 students. Draw balls to find the answer :









- How many balls does each one get? .... balls.
- The division equation is: .... ÷ .... = ...



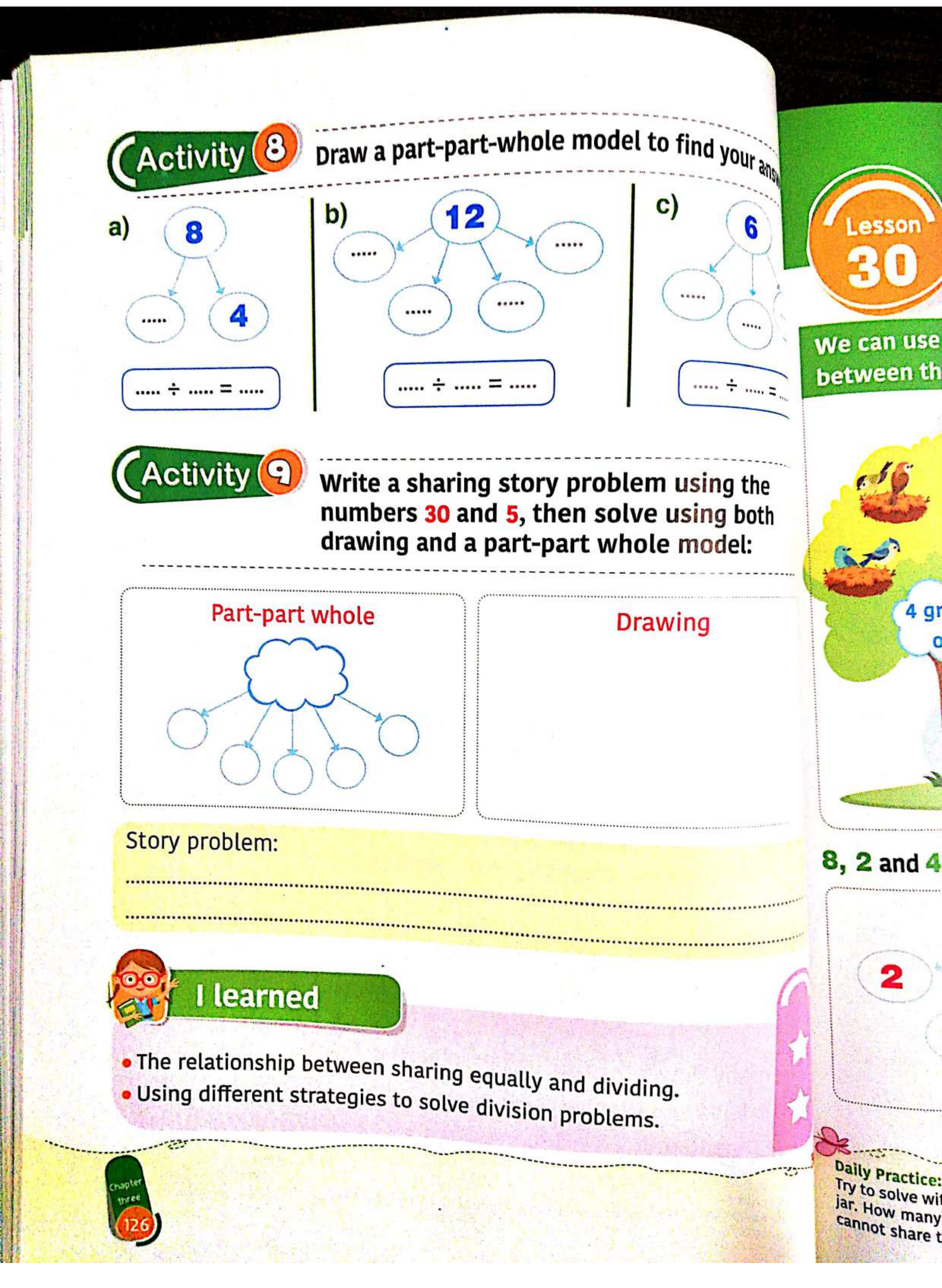
There are 12 flowers needed to be put in 4 vases, draw to show the equal sharing:






- How many flowers should be put in each vase? .... flowers.
- The division equation is .... ÷ .... = ...

Home Activity:
- Provide your child a space to explain his/her ways of thinking by drawing pictures or using set of counters to solve the story problems.



Activity 8

Draw a part-part-whole model to find your answ...

a) 8 → ..... , 4

..... ÷ ..... = ...

b) 12 → ..... , ... , ... , ...

..... ÷ ..... = ...

c) 6 → ..... , ...

..... ÷ ..... = ...

Activity 9

Write a sharing story problem using the numbers **30** and **5**, then solve using both drawing and a part-part whole model:

Part-part whole	Drawing

Story problem:

....

....

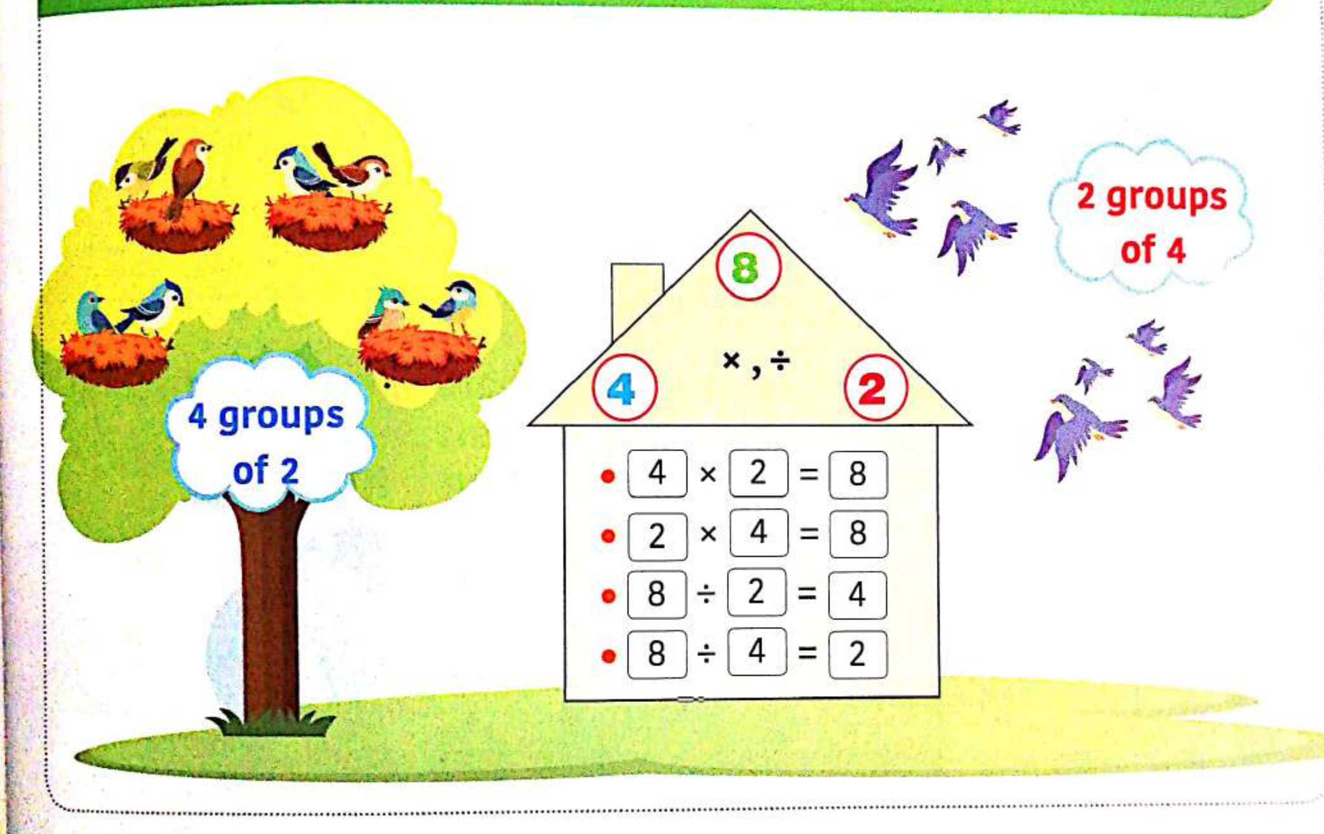
I learned

- The relationship between sharing equally and dividing.
- Using different strategies to solve division problems.

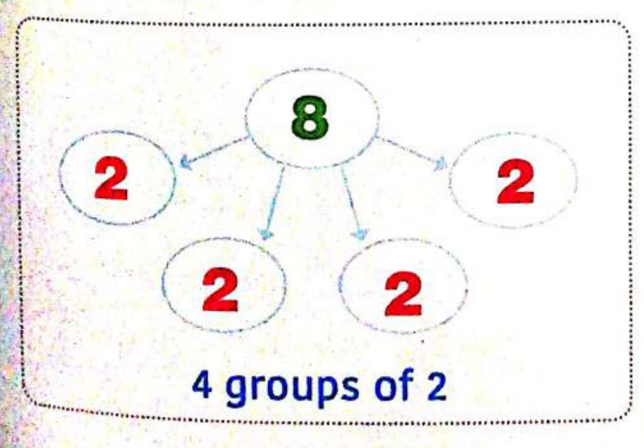


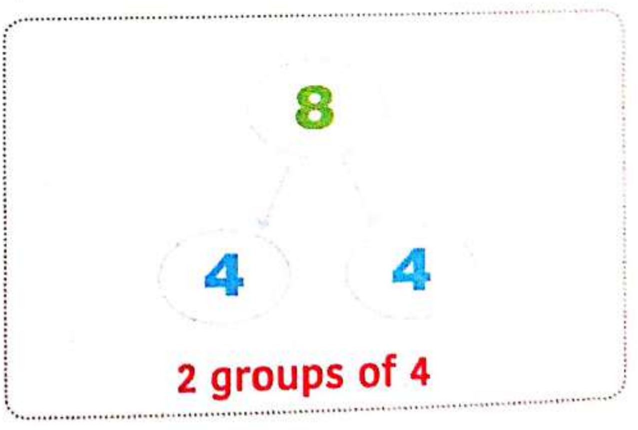
The relation between multiplication and division

We can use this fact family house to represent the relation between the 3 numbers



8, 2 and 4 are members of the multiplication and division fact family:





Daily Practice:
Try to solve with your child the problem, Laila had 18 flowers. She wanted to put 5 flowers in each jar. How many jars would Laila need? And let your child notice that there are extra flowers. We cannot share them equally and they are called the remainder.





Activity 1 We have a group of 20 mangoes divided into 4 groups. Complete the fact family:

We have 4 group of 20 mangoes.

20 | 4 | × , ÷

- 4 × 5 = 20
- ...... × 4 = 20
- 20 ÷ 4 = ...
- 20 ÷ 5 = ...

Activity 2 Write the missing numbers in each fact family

a) 3 | 7 | × , ÷

- ...... × ...... = ...
- ...... × ...... = ...
- ...... ÷ ...... = ...
- ...... ÷ ...... = ...

b) 18 | 6 | × , ÷

- 6 × ...... = ...
- ...... × 6 = ...
- 18 ÷ ...... = ...
- ...... ÷ 6 = ...

c) 12 | 2 | × , ÷

- 2 × ...... = 12
- ...... × 2 = 12
- 12 ÷ 2 = ...
- 12 ÷ ...... = ...

Parents' Tips:

- Help your child recognize the division symbol (÷) that when we write the 2 division equations start with the bigger number the other sign (x) is called a multiplication symbol that when write the 2 multiplication equations we use the factors.



Activity 3

Describe each array using one multiplication equation and one division equation:

a)



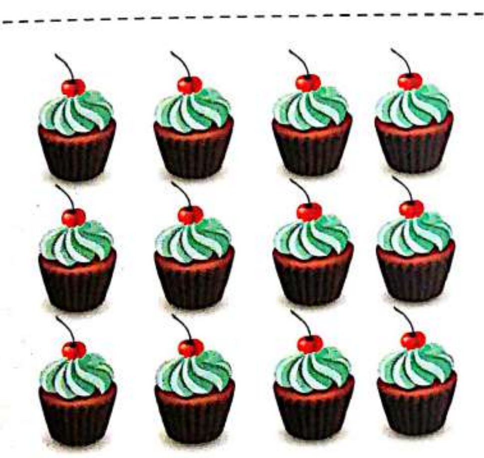
- ...... × 3 = 15
- 15 ÷ 3 = ...

b)

- ...... × 6 = ...
- 24 ÷ 6 = ...

Activity 4

Describe the following array using the multiplication and division equations:



- ...... × ...... = ...
- ...... × ...... = ...
- ...... ÷ ...... = ...
- ...... ÷ ...... = ...



I learned

- The relation between factors and their product.
- Applying the relation between multiplication and division to identify fact families.

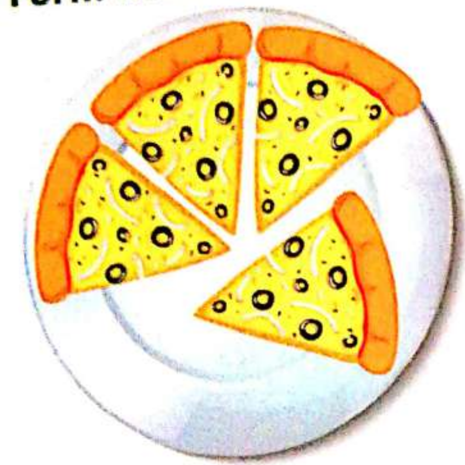
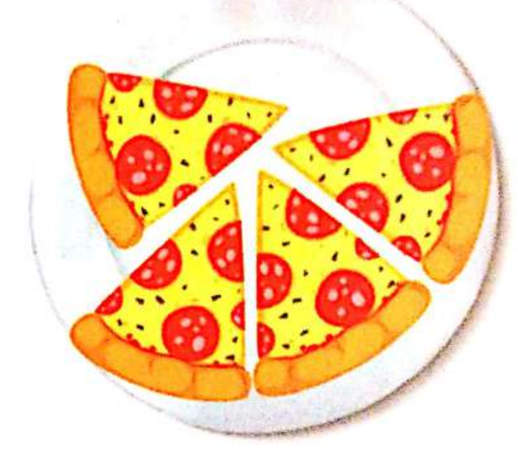






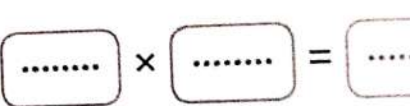


1 **Form the multiplication equation of the problem:**

Ahmed packed the pieces of pizza into [........] groups, each one has [........] pieces of pizza.

Then the multiplication equation is: [........] × [........] = [........]

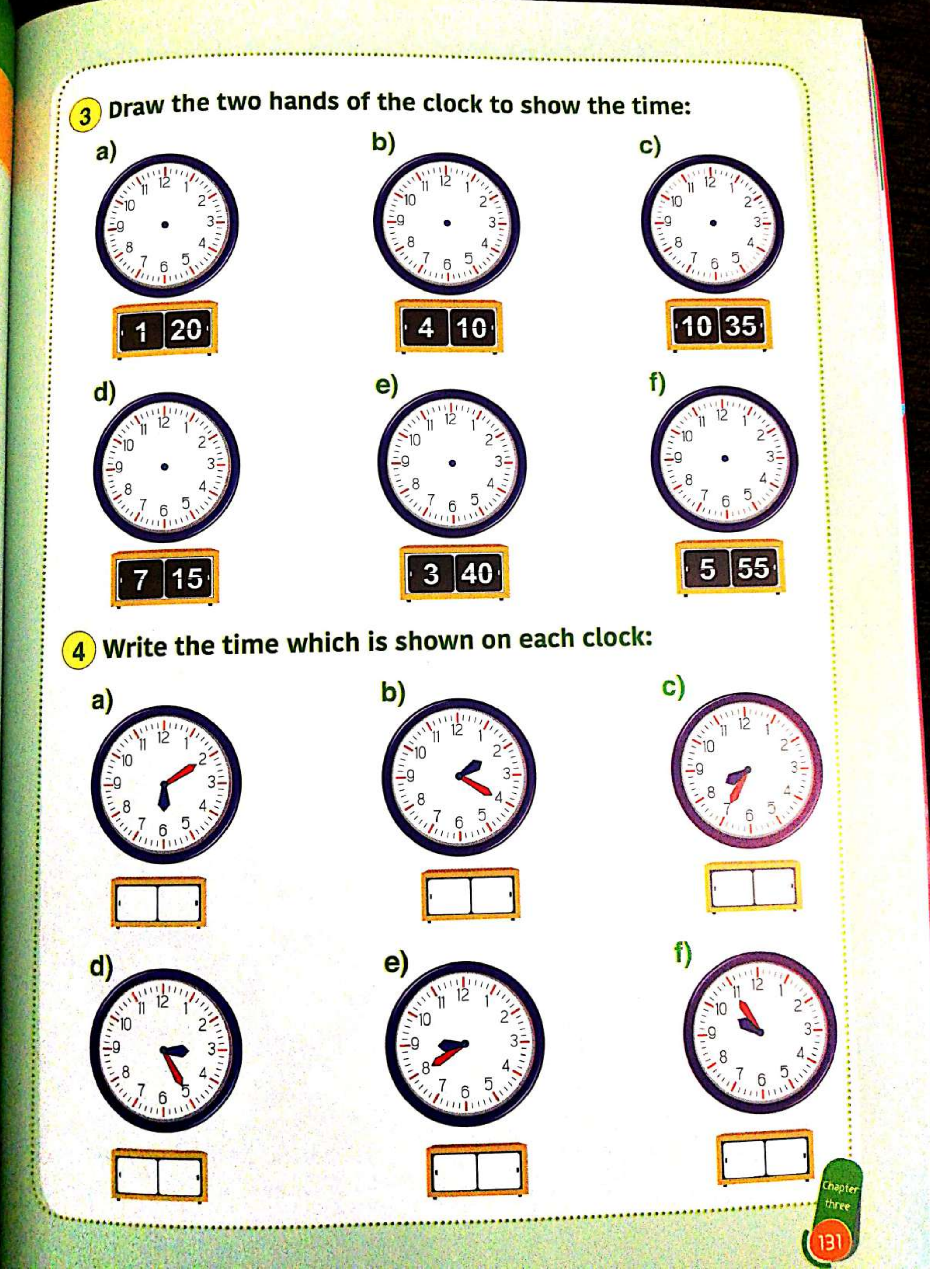


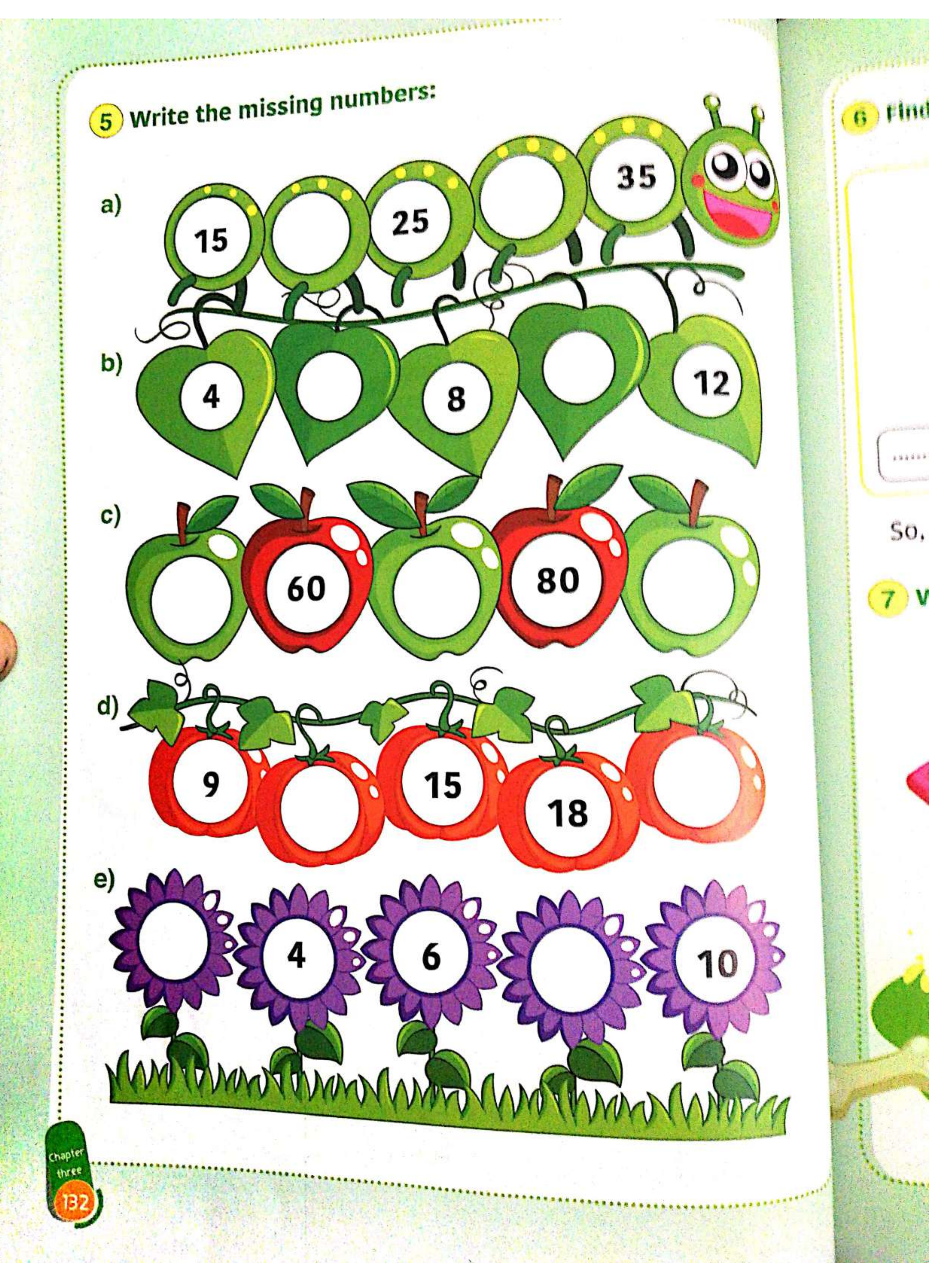
2 **Form the multiplication equation to calculate the number of fish in all fishbowl:**



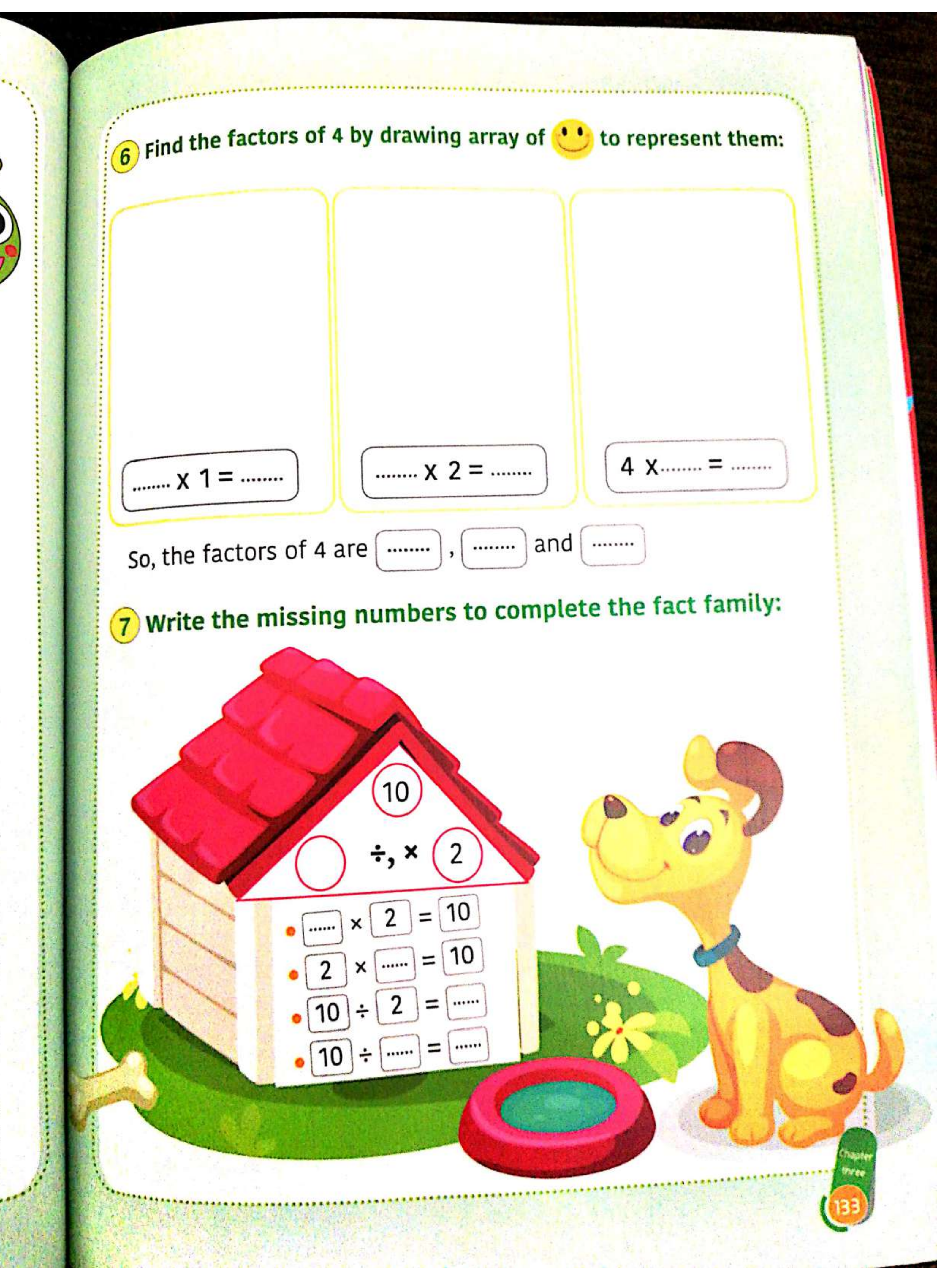
The multiplication equation is: [........] × [........] = [........]




3 Draw the two hands of the clock to show the time:
a) 1 20
b) 4 10
c) 10 35
d) 7 15
e) 3 40
f) 5 55
4 Write the time which is shown on each clock:
a)
b)
c)
d)
e)
f)
Chapter three
131



5 Write the missing numbers:
a)
15
25
35
b)
4
8
12
c)
60
80
d)
9
15
18
e)
4
6
10
6 Find
So,
7 W
Chapter three
132



6 Find the factors of 4 by drawing array of 🙂 to represent them:

.... x 1 = ...

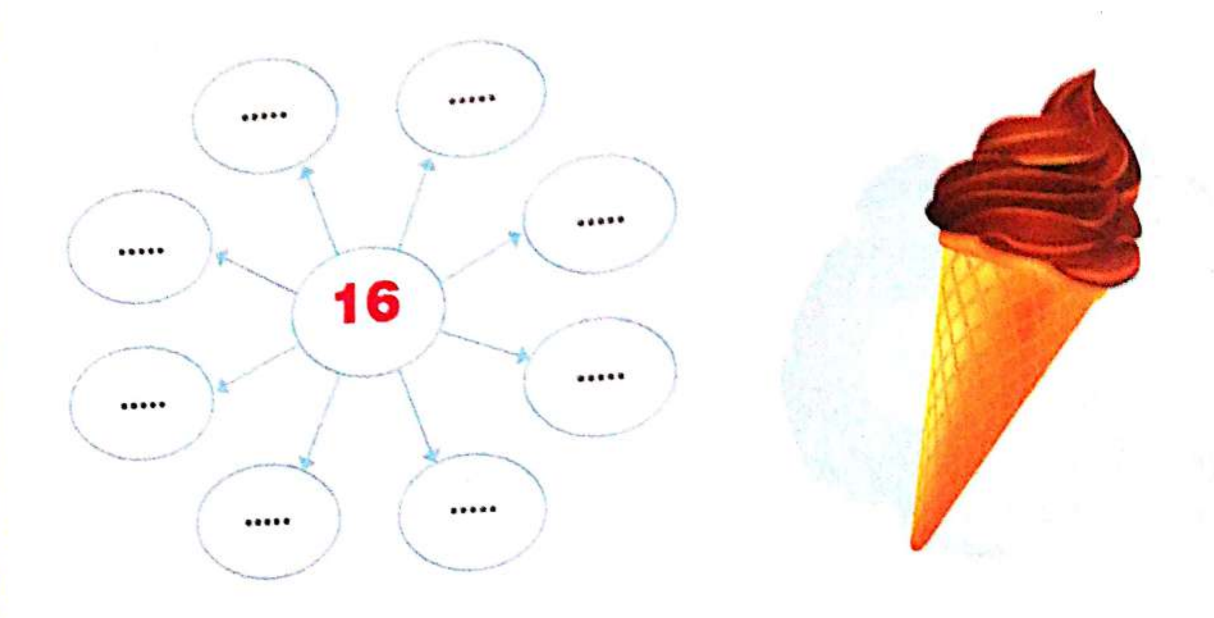
.... x 2 = ...

4 x........ = ...

So, the factors of 4 are .... , ... and ....

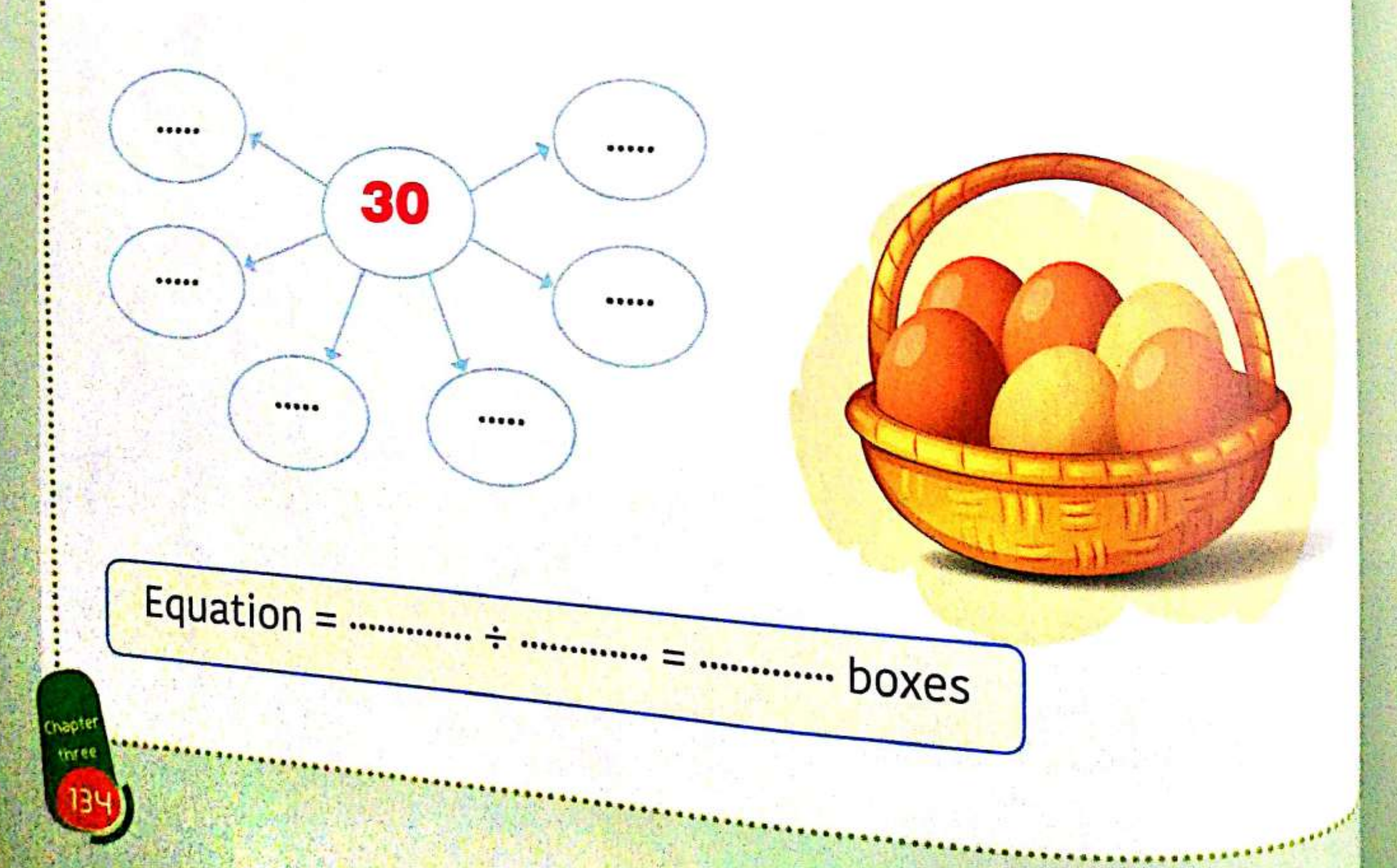
7 Write the missing numbers to complete the fact family:

8) Soraya shared 16 scoops of ice cream equally into 8 cones. How many scoops of ice cream in each cone?



Equation = ... ÷ .... = ... scoops

9) Eggs come in a boxes of 6. Laila needs 30 eggs to make a wedding cake. How many boxes should she buy?



Equation = ... ÷ .... = ... boxes



1 Complete:

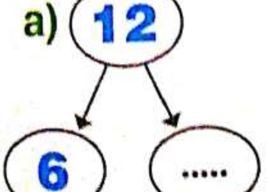
a) An octopus has 8 legs. Mohamed counted 4 octopuses in the tank.
How many legs are there in the tank? .... legs.

b) 5 people can fit in one car, if 20 people want to go to the club.
How many cars they need? .... cars.

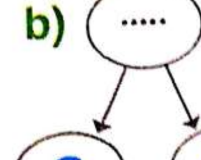
2 Find the product:

a) 18 x 0 = ... **b)** 7 x 5 = ... **c)** 3 x 2 = ... **d)** 4 x 6 = ...

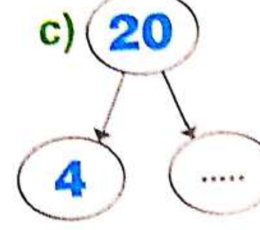
3 Write the missing factors to complete the fact family:

a)


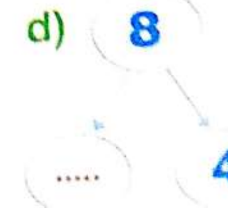
6 x ...... = 12

b)


..... x ..... = ...

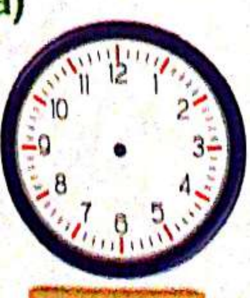
c)


..... x ..... = ...

d)


..... x ..... = ...

4 Draw the 2 hands of each clock to show the time:

a)


5 05

b)


3 45

c)


7 35

d)


4 20


Al-Adwaa
oasis
Write, then color the multiples of 2 in red, 3 in blue, 5 in yellow and 10 in green:
2x
1 2 3 4 5 6 7 8 9 10 11 12
3x
3
1 2 3 4 5 6 7 8 9 10 11 12
5x
5
1 2 3 4 5 6 7 8 9 10 11 12
10x
10
1 2 3 4 5 6 7 8 9 10 11 12
42
36
27
45

Penguin Division

Color a division equation

a game for 2 players   Need: colored pencils

Players take turns to color the numbers to make a division equation 27,3 and 9 coloring one space from each set, e.g. a player could color $27 \div 3 = 9$ once a number is colored it can't be used again. The winner is the last person to make an equation.

Game 1



20	27	32
18	12	16
12	21	35
14	18	25

÷

3	5	4
2	2	4
4	3	5
5	3	2

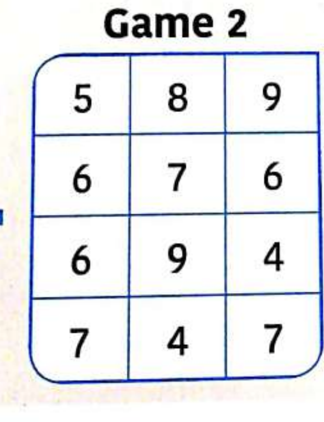
=

5	6	9
4	7	6
7	3	4
7	8	9

Game 2

42	40	32
36	24	35
27	32	30
45	28	25

÷



5	8	9
6	7	6
6	9	4
7	4	7

=

3	5	4
8	5	10
5	6	5
4	6	4

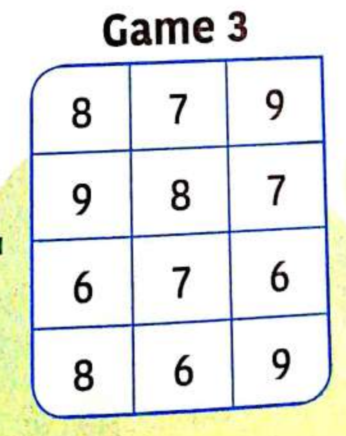


Game 3



49	42	24
72	28	54
36	56	32
81	30	64

÷



8	7	9
9	8	7
6	7	6
8	6	9

=

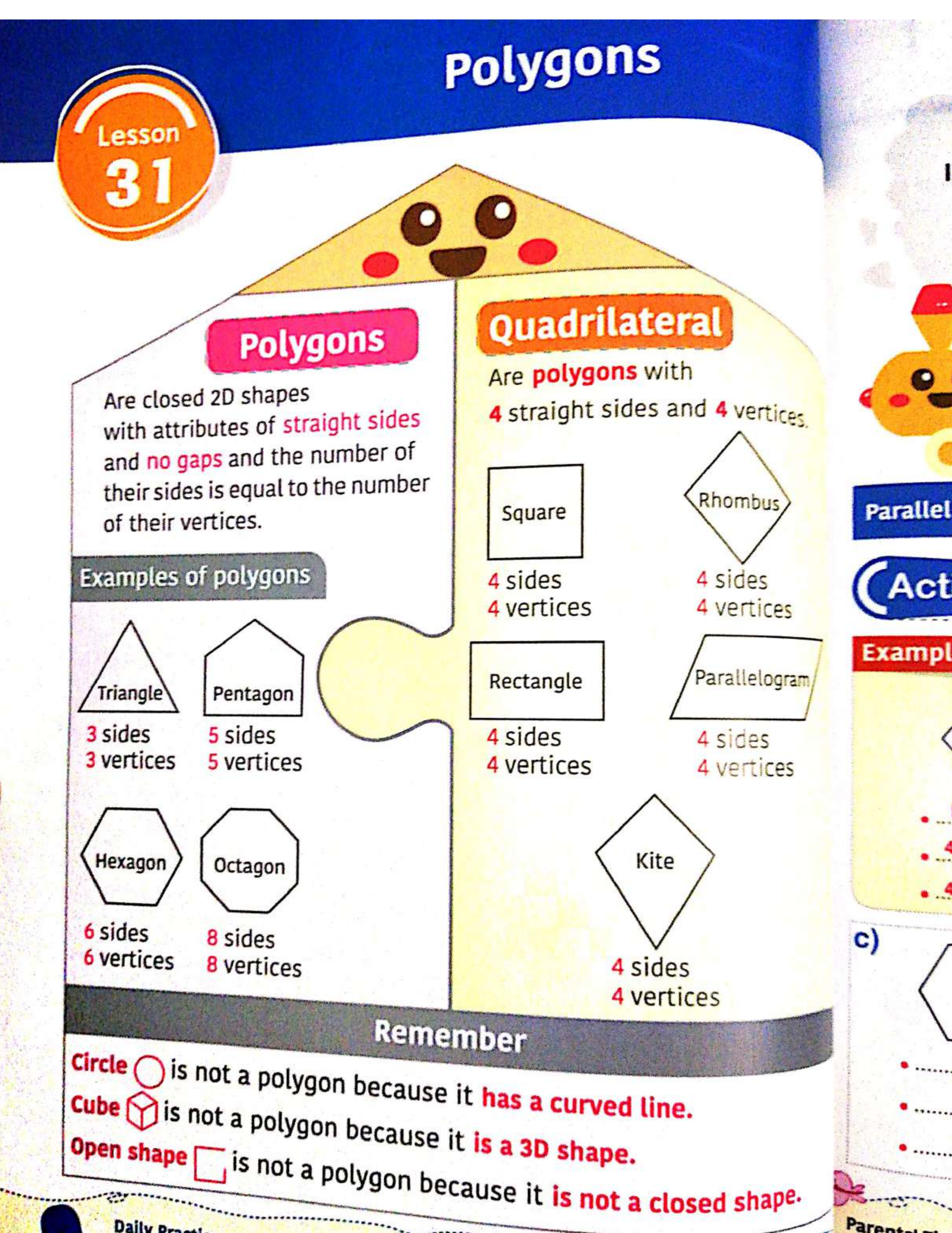
9	8	4
6	5	7
4	4	6
7	6	8

Chapter 4



Pacing Guide

Lesson	Instructional Focus	Key vocabulary
Lesson 31	**Polygons** • Identify the attributes of 2D shapes. • Sort 2D shapes based on these attributes. • Define polygon and parallelogram.	• Attribute • Closed figure • Hexagon • Octagon • Parallel • Parallelogram • Polygon
Lesson 32	**Quadrilaterals** • Describe the attributes of quadrilaterals. • Compare and contrast quadrilaterals. • Sort quadrilaterals using Venn diagram.	• Quadrilateral • Rhombus • Trapezium • Vertex • Vertices
Lesson 33	**Trapezium** • Apply rules to sort quadrilaterals. • Create a bar graph to represent the quadrilaterals that are used to create a picture.	• Trapezium
Lessons 34&35	**The Area** • Build a rectangle with a specified dimensions. • Calculate the area of rectangles in square units. • Determine the area of rectangles using strategies related to multiplication.	• Area • Array • Product • Square unit • Dimensions
Lesson 36	**Rectangles with the same area** • Explain and model the commutative property of multiplication. • Create and describe rectangles with the same area.	• Columns • Commutative property • Rows • Factors
Lesson 37	**Using the dimensions to determine the area** • Define area and apply strategies to measure the area.	• Area • Dimensions
Lessons 38&39	**Distributive property of multiplication** • Divide arrays into smaller arrays to make it easier to solve multiplication problems. • Apply the distributive property to solve multiplication problems • Explain the distributive property of multiplication.	• Distributive property
Lesson 40	**Applying the distributive property of multiplication** • Apply the distributive property to solve multiplication problems.	• Arrays • Distributive property



Lesson 31

Polygons

Polygons

Are closed 2D shapes with attributes of straight sides and no gaps and the number of their sides is equal to the number of their vertices.

Examples of polygons

- Triangle: 3 sides, 3 vertices
- Pentagon: 5 sides, 5 vertices
- Hexagon: 6 sides, 6 vertices
- Octagon: 8 sides, 8 vertices

Quadrilateral

Are **polygons** with **4** straight sides and **4** vertices.

- Square: 4 sides, 4 vertices
- Rhombus: 4 sides, 4 vertices
- Rectangle: 4 sides, 4 vertices
- Parallelogram: 4 sides, 4 vertices
- Kite: 4 sides, 4 vertices

Remember

Circle is not a polygon because it **has a curved line.**

Cube is not a polygon because it **is a 3D shape.**

Open shape is not a polygon because it **is not a closed shape.**

Daily Practice:

Practice with your child by playing who am I? and give him/her some clues as this quadrila... four slanted sides (two sets of parallel sides) and two of the ... the other ... alike who am I? (A parallelogram or ...

Parallel

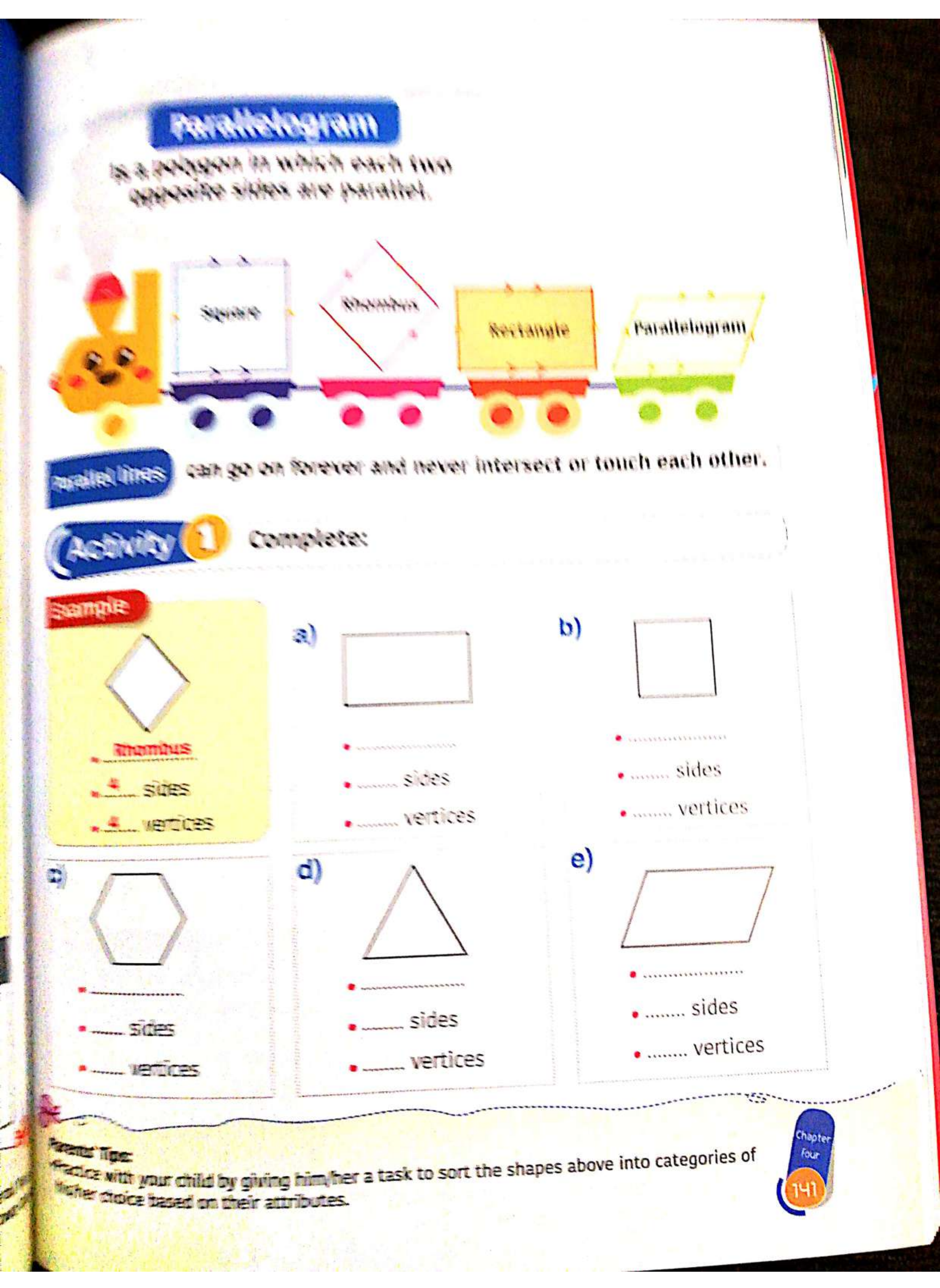
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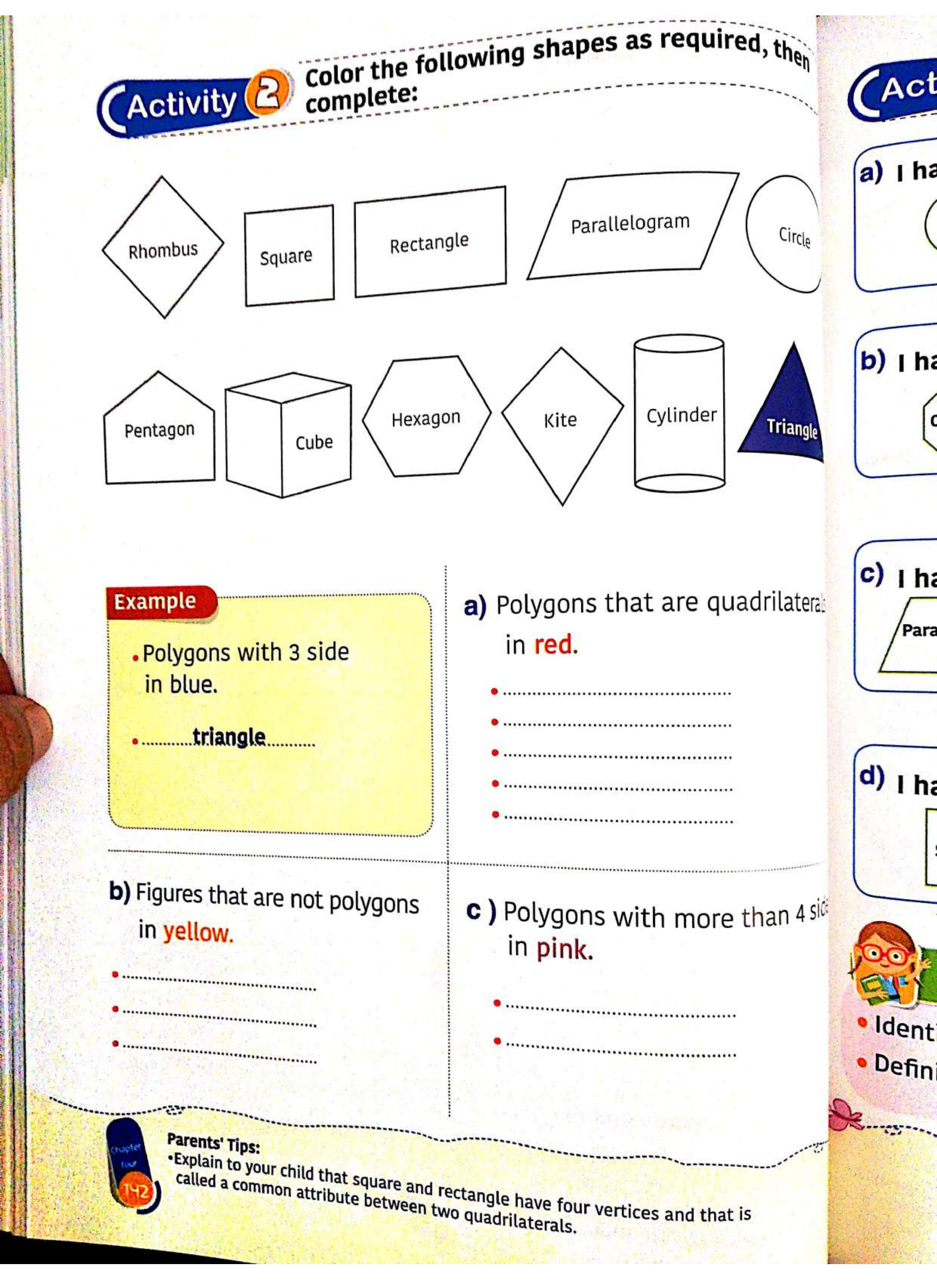
Exampl

c)

Parents' Tips

•Practice wit his/her cho


Parallelogram
is a polygon in which each two opposite sides are parallel.
Square
Rhombus
Rectangle
Parallelogram
Parallel lines can go on forever and never intersect or touch each other.
Activity 1 Complete:
Sample
Rhombus
4 sides
4 vertices
a)
....
.... sides
.... vertices
b)
....
.... sides
.... vertices
c)
....
.... sides
.... vertices
d)
....
.... sides
.... vertices
e)
....
.... sides
.... vertices
Parents' Tips:
Practice with your child by giving him/her a task to sort the shapes above into categories of his/her choice based on their attributes.
Chapter four
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Activity 2 Color the following shapes as required, then complete:

Rhombus · Square · Rectangle · Parallelogram · Circle

Pentagon · Cube · Hexagon · Kite · Cylinder · Triangle

Example

- Polygons with 3 side in blue.
- ....triangle........

a) Polygons that are quadrilaterals in red.

- ....
- ....
- ....
- ....
- ....

b) Figures that are not polygons in yellow.

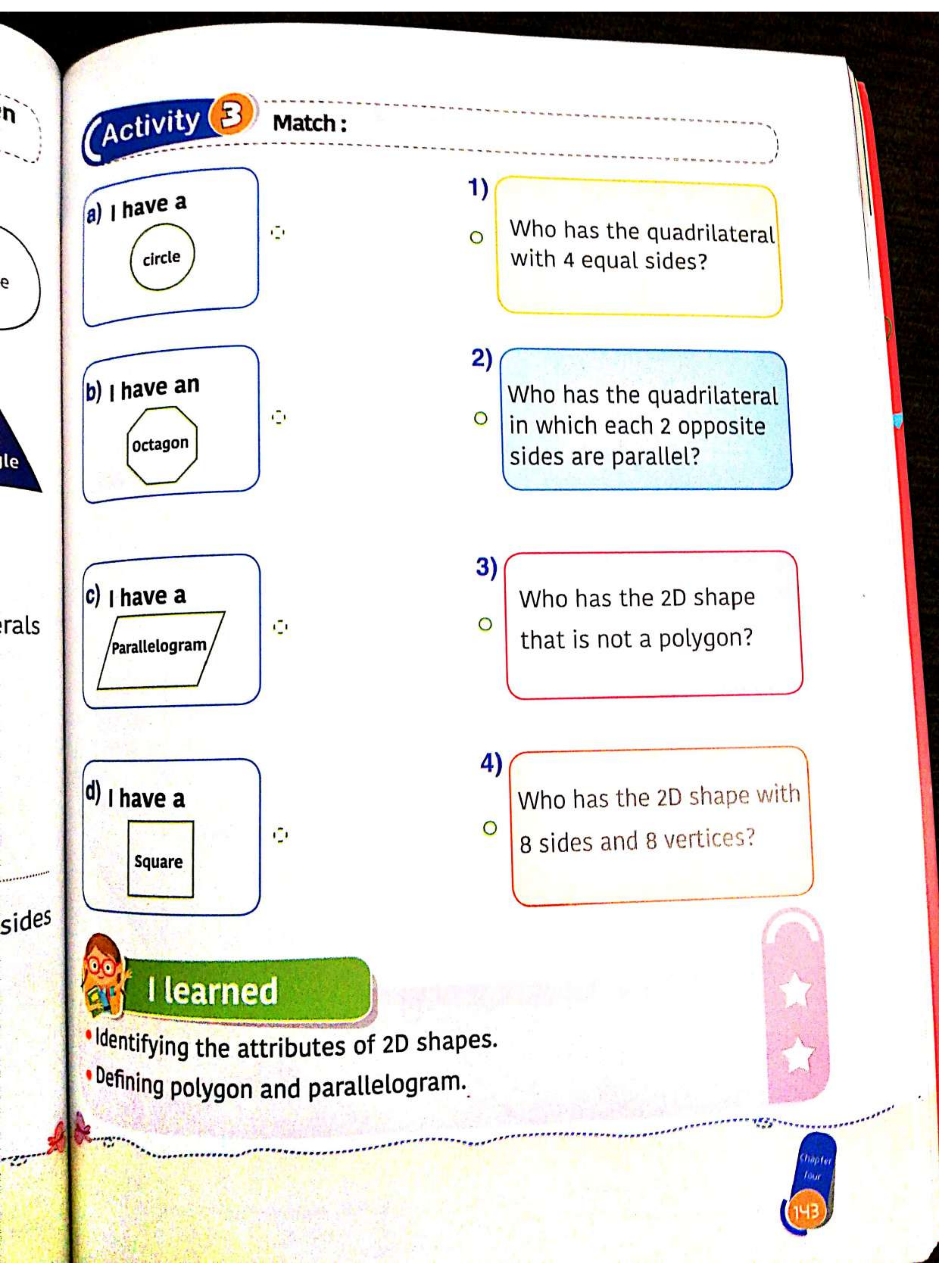
- ....
- ....
- ....

c) Polygons with more than 4 sides in pink.

- ....
- ....

Parents' Tips:

- Explain to your child that square and rectangle have four vertices and that is called a common attribute between two quadrilaterals.



Activity 3 Match :

a) I have a circle

b) I have an Octagon

c) I have a Parallelogram

d) I have a Square

1) Who has the quadrilateral with 4 equal sides?

2) Who has the quadrilateral in which each 2 opposite sides are parallel?

3) Who has the 2D shape that is not a polygon?

4) Who has the 2D shape with 8 sides and 8 vertices?

I learned

- Identifying the attributes of 2D shapes.
- Defining polygon and parallelogram.

Quadrilaterals

Lesson 32

Square | Rectangle

Have the same vertices

Square | Rhombus

Have equal sides

Kite | Trapezium

No equal sides. Vertices are not the same

Rectangle | Square | Parallelogram | Rhombus

Each 2 opposite sides are parallel

Rectangle

The square is in the intersection par[t] because its 4 sides are equal and has the same 4 vertices.

We can sort the quadrilateral shapes on a Venn diagram.

Have the same vertices. | Their sides are equal.

Rectangle | Square | Rhombus



Quadrila

Sid

Vert

Par si

Nur of s

Num ver



Daily Practice:

Play a game with your child, let him/her roll a die to find the factor for 7 X ..... = ..., then the number in the first blank, then multiply to find the product.

Parent

- Tell y that
- Ask y



Complete the attributes of quadrilaterals:

Quadrilateral	Parallelogram	Rectangle	Square	Rhombus	trapezium
Sides	....	Sides aren't equal	....	Sides are equal	....
Vertices	Vertices aren't the same	....	Vertices are the same	....	....
Parallel sides	Each 2 sides are parallel	....	....	Each 2 sides are parallel	....
Number of sides	....	4	....	....	4
Number of vertices	4	....	....	4	....

Parents' Tips:

- Tell your child that the word quadrilateral "quad" means four, so that helps him/her remember that these are shapes with four sides.
- Ask your child to tell you, how they are the same, and how they are different.



Activity 2 Look at the Venn diagram, then find:

4 equal sides

Have the same vertices

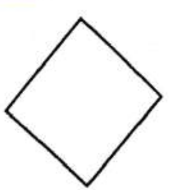
a) How many quadrilaterals have parallel opposite sides? ....

b) How many quadrilaterals have the same vertices? ....

c) How many quadrilaterals have equal sides? ....

d) How many quadrilaterals have the same vertices and equal sides? ....



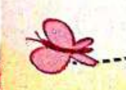




• Whic
are t



• Compa
• Sortin



Parents' Tips:

• Help your child form his/her own Venn diagram, label it and draw each shape.

Activity 3

Sort the following quadrilaterals, then fill the Venn diagram by drawing each shape:

Each 2 opposite sides are equal

4 vertices are the same

• Which quadrilateral has 4 equal sides and 4 vertices that are the same? ....



I learned



• Comparing and contrasting quadrilaterals.

• Sorting quadrilaterals using the Venn diagram.





Trapezium





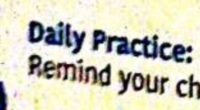


Trapezium

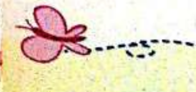
It is a type of quadrilaterals with only one set of parallel sides and the other two sides are not parallel.

Activity 1 Color the shape according to the given clues:

Clue	Shapes		
a) I have only 2 parallel sides.	Rhombus	Parallelogram	Trapezium
b) I have 4 equal sides.	Trapezium	Square	Kite
c) Each 2 opposite sides are equal and parallel.	Kite	Parallelogram	Trapezium



Daily Practice:
Remind your child that the sides of the quadrilaterals don't have to be equal in length.



Parents' Tips:
• Guide your c
sides are dif

Activity 2

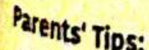
Count the number of each type of quadrilaterals and create a bar graph:

Quadrilaterals

Number of shapes: 5, 4, 3, 2, 1, 0

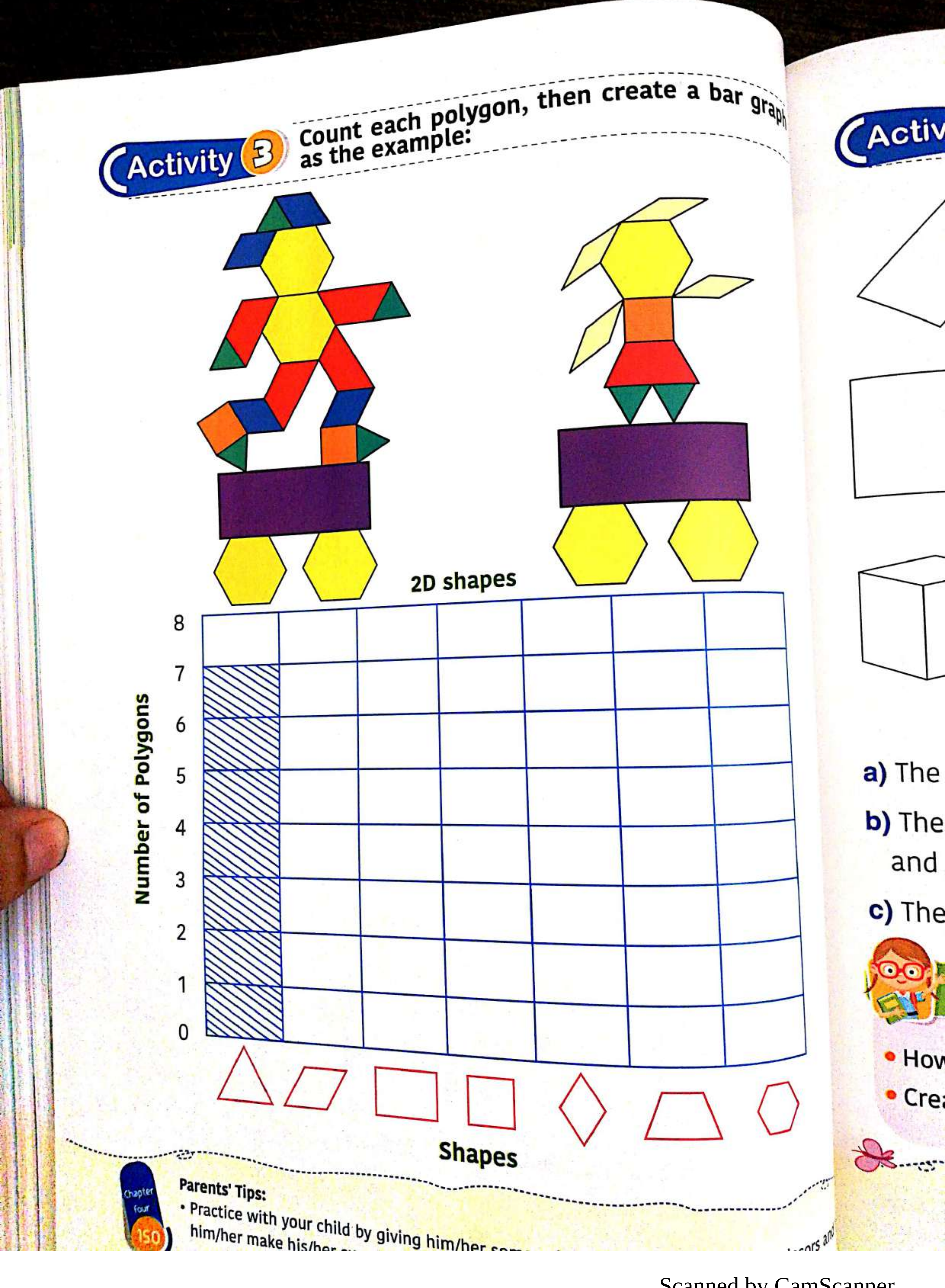
Parallelogram | Rectangle | Rhombus | Square | Trapezium

Name of shapes



Parents' Tips:

- Guide your child to recognize that the trapezium is a quadrilateral that has four sides and all its sides are different in length.



Activity 3

Count each polygon, then create a bar graph as the example:

Parents' Tips:

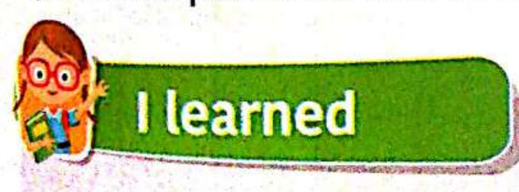
- Practice with your child by giving him/her some ... him/her make his/her ...

Activity 4 Color as required:

a) The quadrilateral of only two parallel sides in red.

b) The quadrilateral in which each two opposite sides are equal and parallel in green.

c) The shapes that are not polygons in yellow.



- How to sort quadrilaterals.
- Creating a bar graph representing quadrilaterals.



The Area

Area

Is the space inside a shape (number of square units)



How can we find the area?

we can use 2 strategies:

First strategy:

Count the total number of squares inside the rectangle.

Area = 18 square units.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

Second strategy:

Count the number of rows and the number of columns (Dimensions), then multiply.

number of rows × number of columns

3 × 6 = 18 square units.

Row 3

Column 6

Daily Practice:

Play a mystery multiplication game with your child, let him/her roll the die and record the factors to find the product of multiplication by number 3.

(Activity

Example

Area =

or

4 ×



a)

Area = ... s

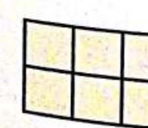
d)

Area = ... s

g)

Area = ... s

j)



Area = ... s

Parents' Tips:

•Help your chi

many column



Find the area of the following rectangles:

Example

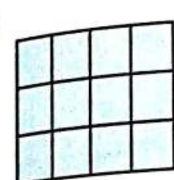
Area = 20 square units.

or

4 × 5 = 20 square units.

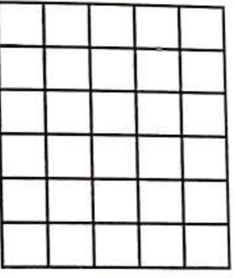
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

a)



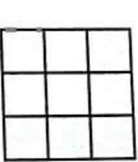
Area = ... square units

b)



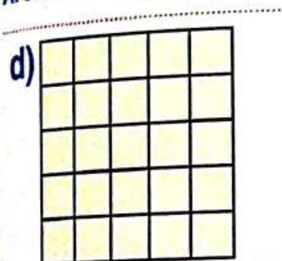
Area = ... square units

c)



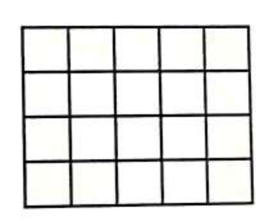
Area = ... square units

d)



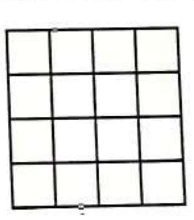
Area = ... square units

e)

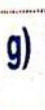


Area = ... square units

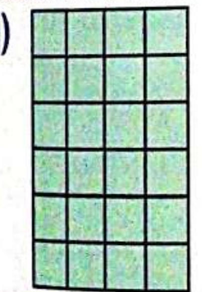
f)



Area = ... square units

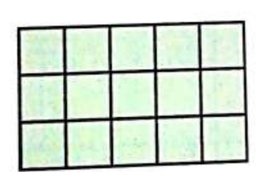


g)



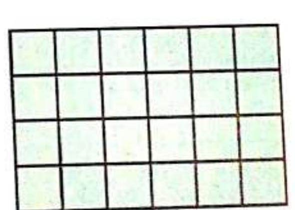
Area = ... square units

h)



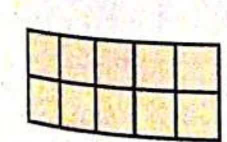
Area = ... square units

i)



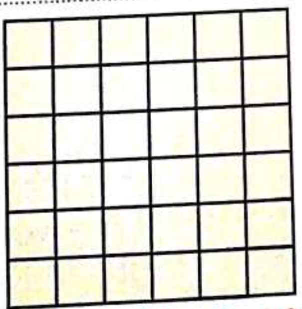
Area = ... square units

j)



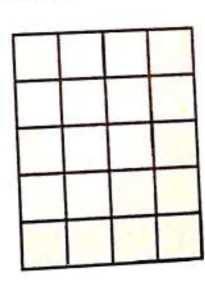
Area = ... square units

k)



Area = ... square units

l)



Area = ... square units

Parents' Tips:

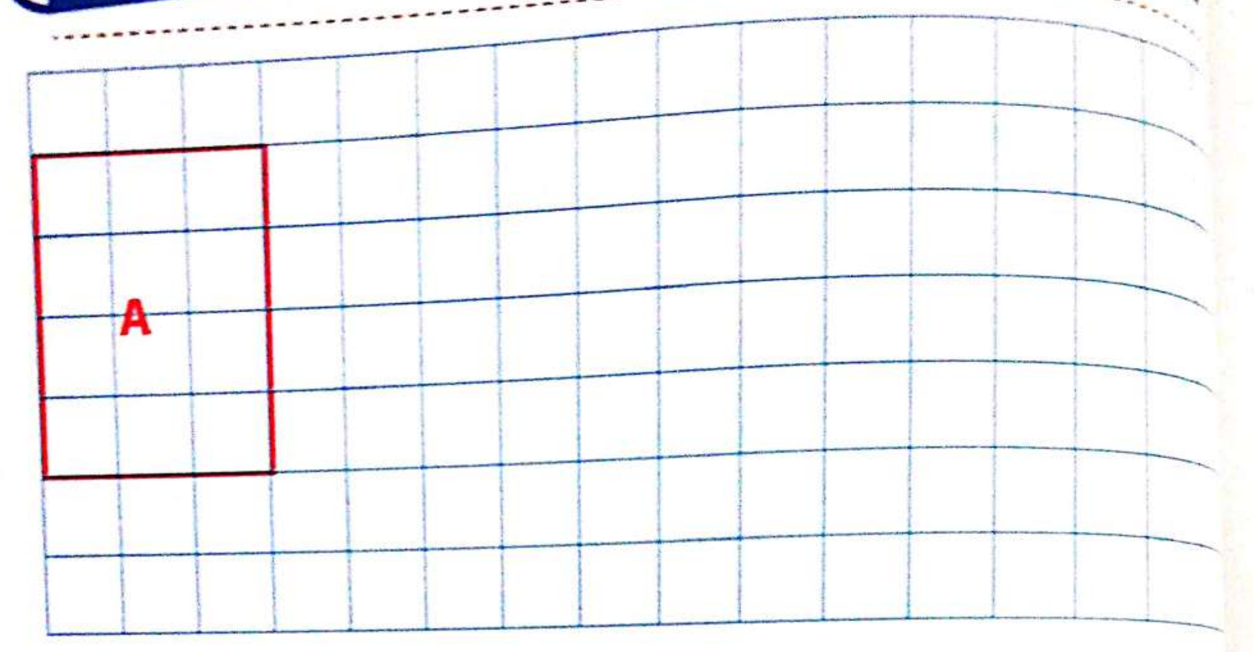
•Help your child recognize the dimensions of the rectangle as how many rows and how many columns and tell him/her that it reminds us of the array.





Activity 2 Draw rectangles according to the given rows and columns, then calculate the area.





Example

- Rectangle A

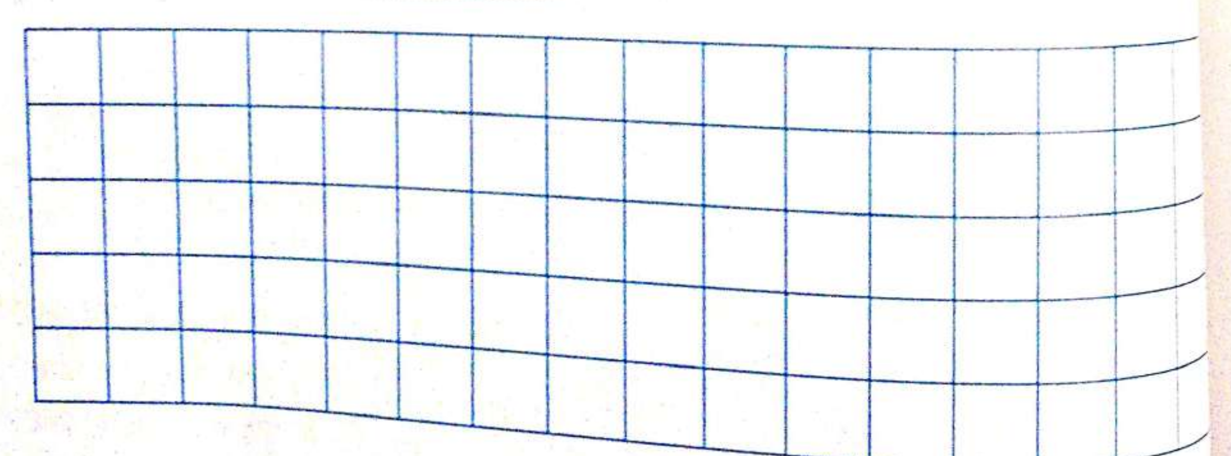
  4 rows and 3 columns

  Area = 4 × 3 = 12 square units.

a) Rectangle B

2 rows and 5 columns

Area= ..... × .....= ..... square units



b) Rectangle C

3 rows and 5 columns

Area = ---- × ---- = ---- square units

c) Rectangle D

5 rows and 3 columns

Area = ---- × ---- = ---- square un

Parents' Tips:

- Help your child understand the concept of how to find the area by giving him/her small squares to make a rectangle by his/her own, then the number of squares he/she used is the



Draw to find the area to solve the following garden plot problems:

Example

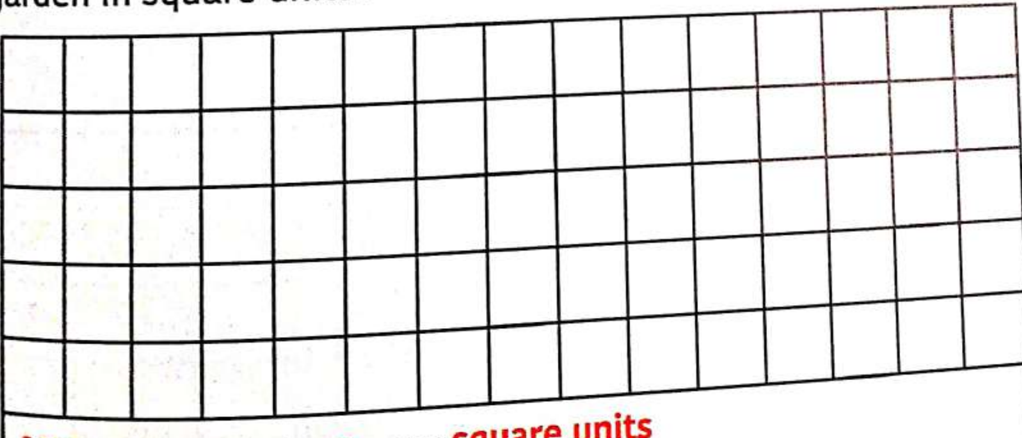
- Karim is planting corn, if each corn plant needs 1 square unit of space. He would like his garden to have 5 rows with 4 square units in each.
  How many corn plants can Karim plant in his garden? What is the area of his garden in square units?

4 columns

5 rows

Area = 5 × 4 = 20 square units.
No.of corn plants = number of square units = 20 corn plants

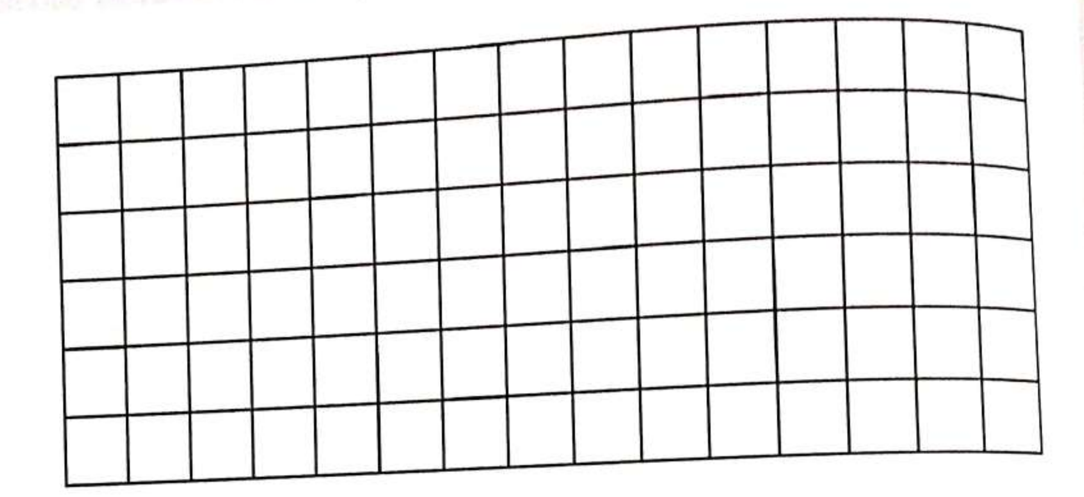
a) Mai wants to plant tomatoes in her garden. Each tomato plant needs 1 square unit of space. She wants her garden to have 4 rows with 3 square units in each.
How many tomato plants can she plant in her garden? What is the area of the garden in square units?



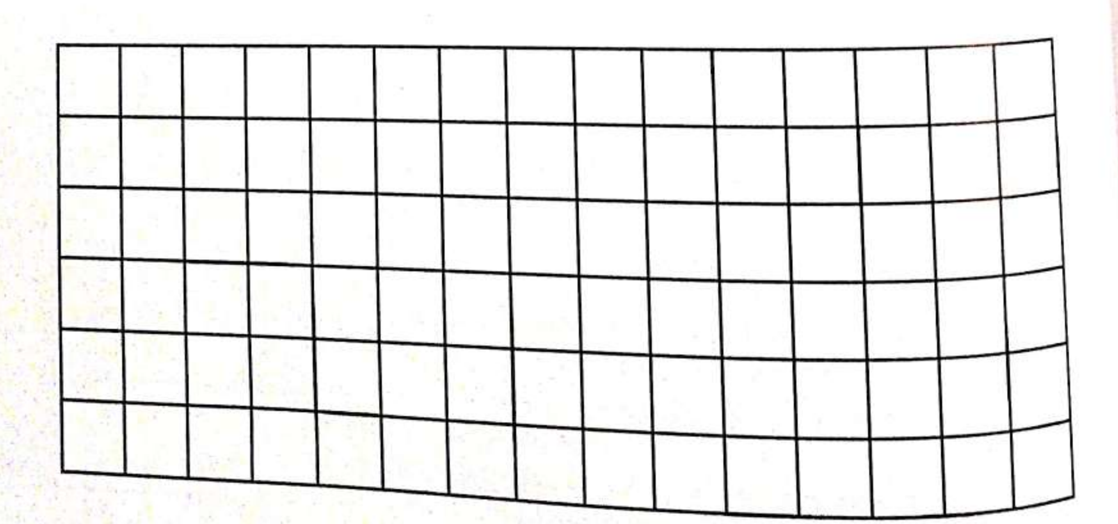
Area = ... × .... = ... square units
No. of tomato plants = ... tomatoes

Parents' Tips:
- Ensure that your child notices that the AREA of the garden is equal to the square units inside it.
- Practice with your child by helping him/her to make more garden plots using small cut squares and some grid paper.

b) Yassin wants to plant strawberry in his garden. Each strawberry plant needs 1 square unit of space. He would like the garden to have 6 rows with 3 square units in each row. How much strawberry plants can Yassin fit in his garden? What is the area of his garden in square units?



c) Noura and Noha have two rectangular gardens, one for watermelon and one for corn. The watermelon takes up 4 square units and the corn takes up 2 square units and both of them have rows of 5. Draw to find the area of Noura and Noha's gardens in square units?

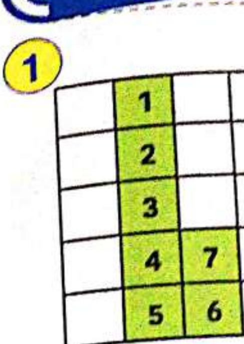


Parents' Tips:

- Help your child recognize that the area is equal to the number of rows multiplied by the number of columns.

Activity

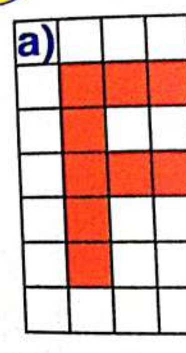
1



Example

Area = 7 squ... un...





Area = ... sq... u...



- Calculat...
- Determi... multipli...

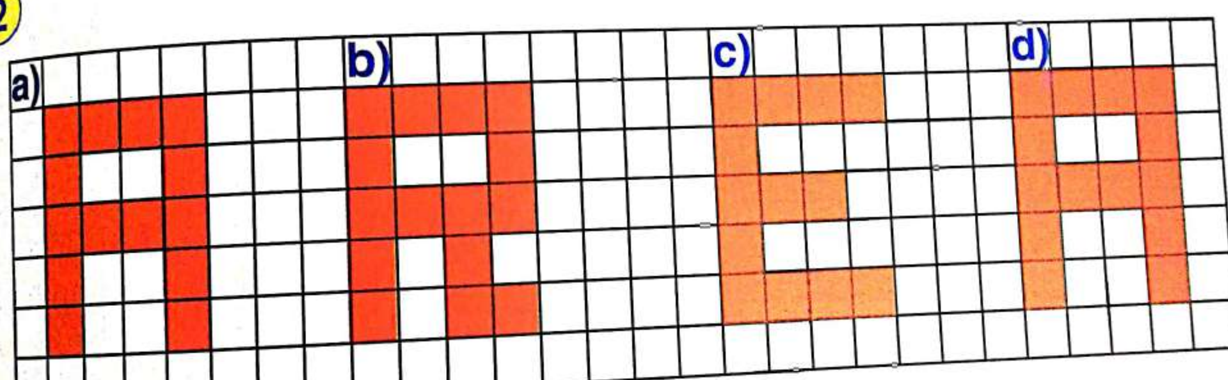
Activity 4 Find the area of these gardens:

1

a) b) c)

Example	a)	b)	c)
Area = 7 square units	Area = ... square units	Area = ... square units	Area = ... square units

2



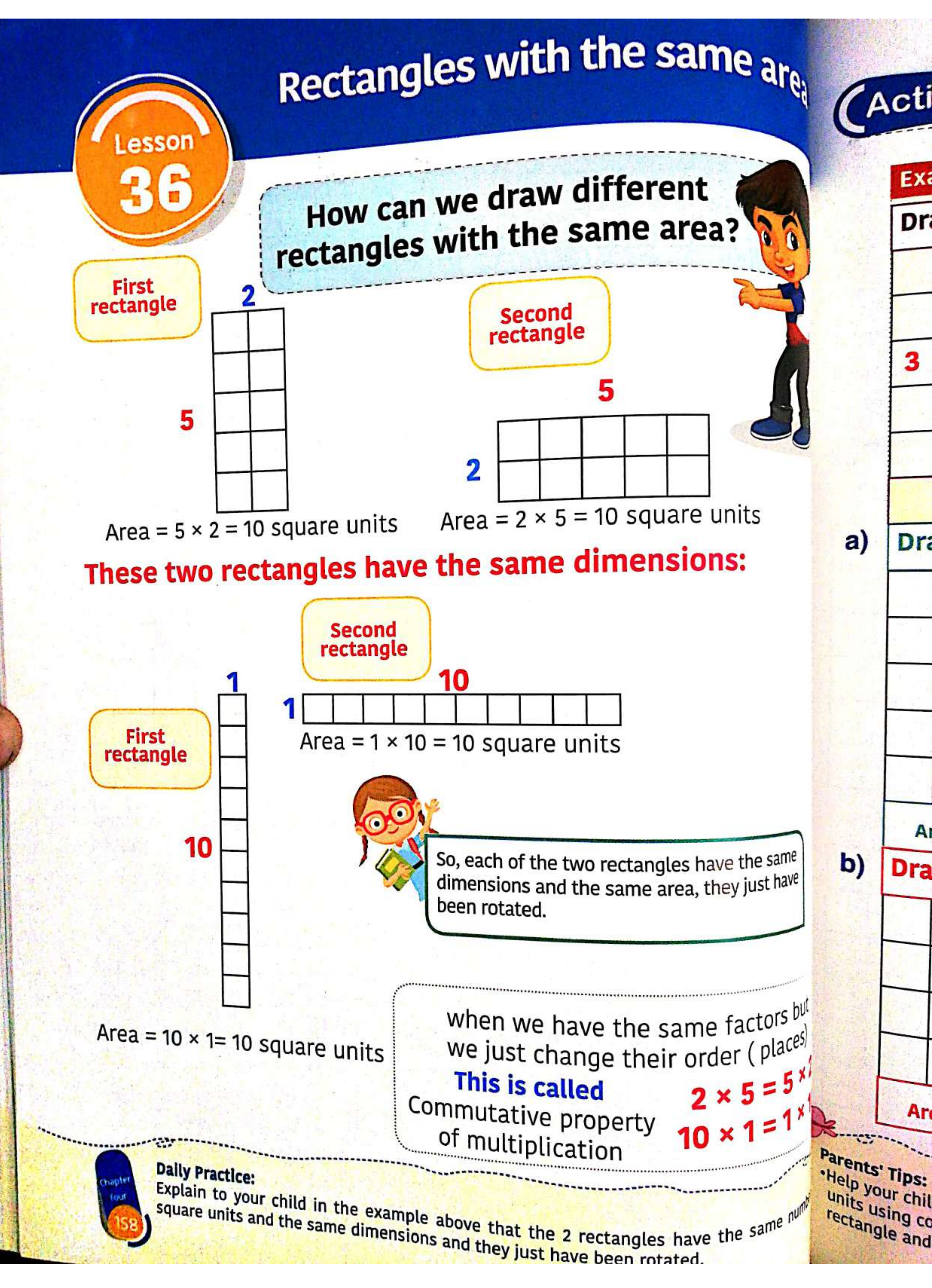
a)	b)	c)	d)
Area = ... square units	Area = ... square units	Area = ... square units	Area = ... square units



I learned

- Calculating the area of rectangles in square units
- Determining the area of rectangles using strategies of multiplication.





Lesson 36

Rectangles with the same area

How can we draw different rectangles with the same area?

First rectangle

2 × 5 grid (width 2, height 5)

Area = 5 × 2 = 10 square units

Second rectangle

5 × 2 grid (width 5, height 2)

Area = 2 × 5 = 10 square units

These two rectangles have the same dimensions:

First rectangle

1 × 10 grid (width 1, height 10)

Area = 10 × 1= 10 square units

Second rectangle

10 × 1 grid (width 10, height 1)

Area = 1 × 10 = 10 square units

So, each of the two rectangles have the same dimensions and the same area, they just have been rotated.

when we have the same factors but we just change their order (places)

This is called

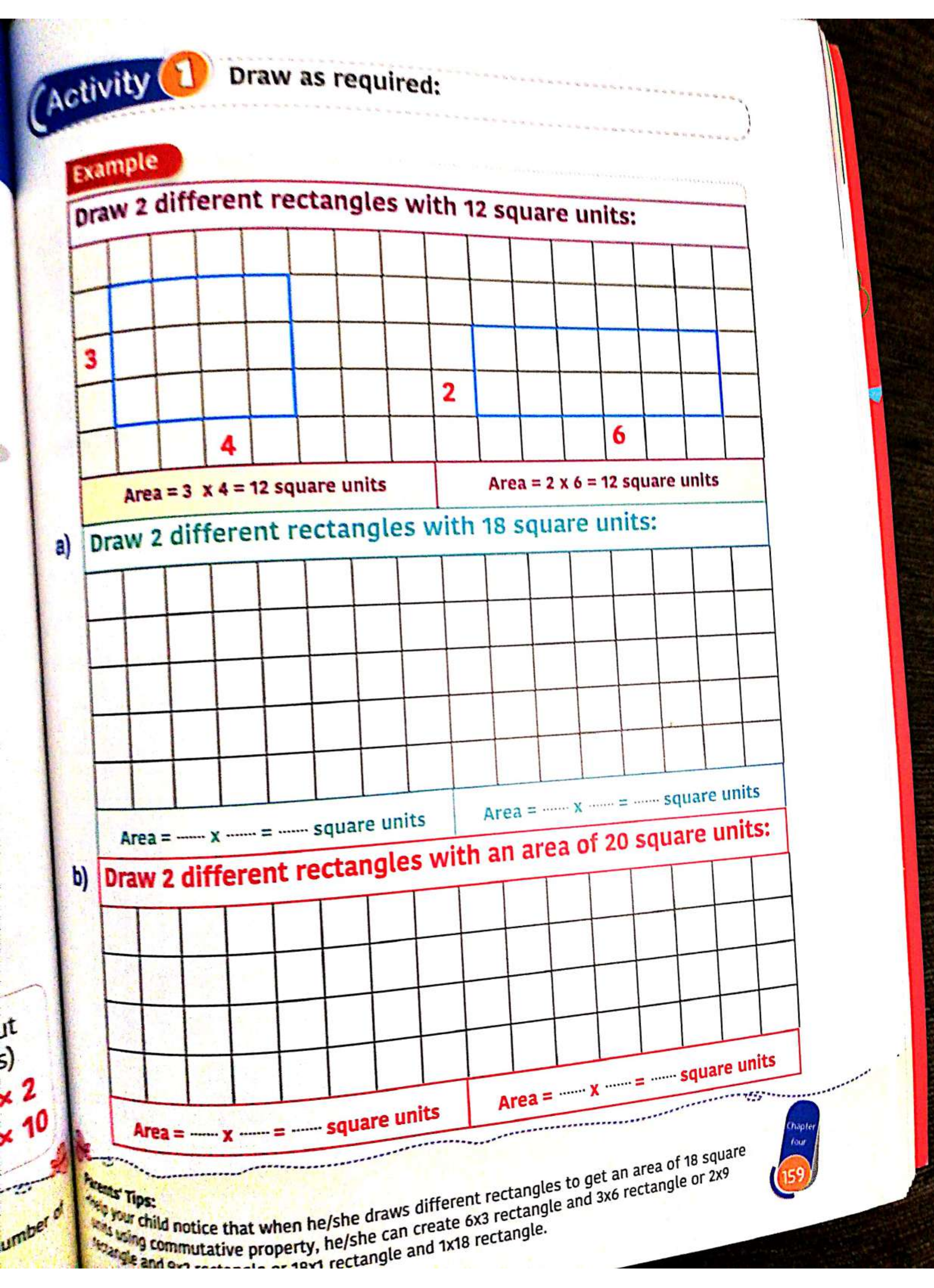
Commutative property of multiplication

$2 \times 5 = 5 \times 2$

$10 \times 1 = 1 \times 10$

Daily Practice:

Explain to your child in the example above that the 2 rectangles have the same number of square units and the same dimensions and they just have been rotated.



Activity 1 Draw as required:

Example

Draw 2 different rectangles with 12 square units:

Area = 3 x 4 = 12 square units	Area = 2 x 6 = 12 square units

a) **Draw 2 different rectangles with 18 square units:**

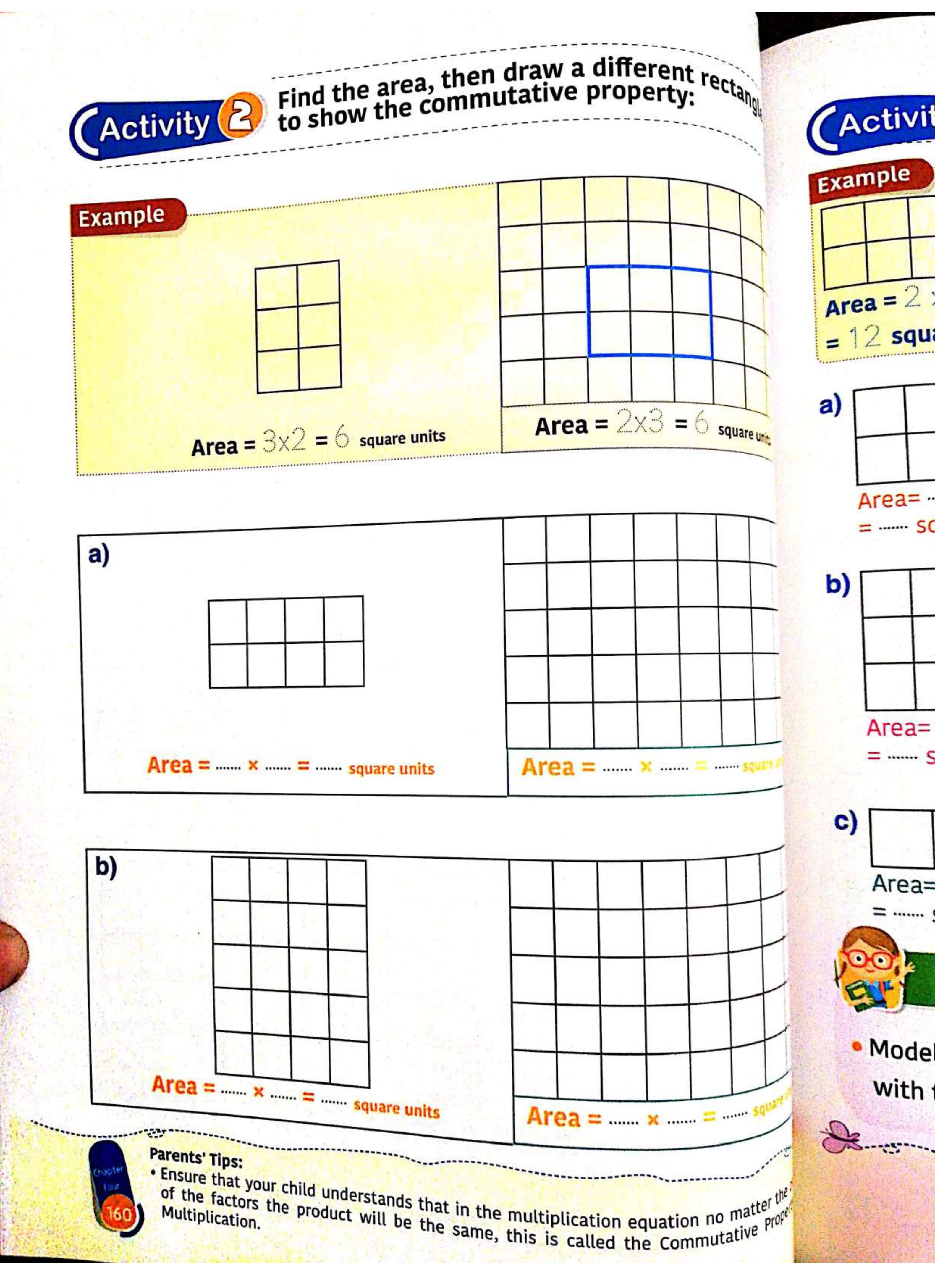
Area = ... x ...... = ... square units	Area = ... x ...... = ... square units

b) **Draw 2 different rectangles with an area of 20 square units:**

Area = ... x ...... = ... square units	Area = ... x ...... = ... square units

Parents' Tips:

Help your child notice that when he/she draws different rectangles to get an area of 18 square units using commutative property, he/she can create 6x3 rectangle and 3x6 rectangle or 2x9 rectangle and 9x2 rectangle or 18x1 rectangle and 1x18 rectangle.



Activity 2 Find the area, then draw a different rectangle to show the commutative property:

Example

Area = 3x2 = 6 square units

Area = 2x3 = 6 square units

a)

Area = ... × .... = ... square units

Area = ... × .... = ... square units

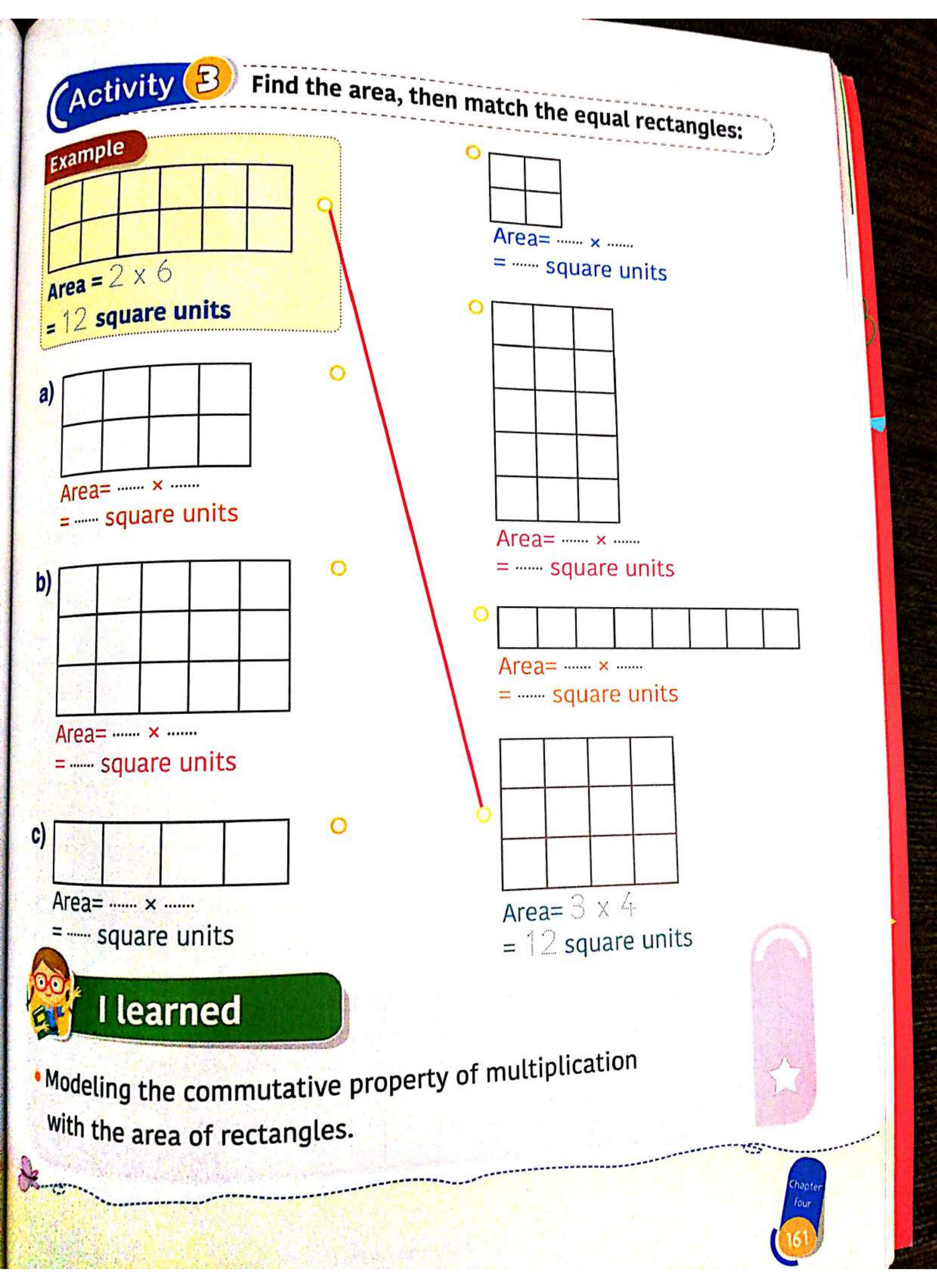
b)

Area = ... × .... = ... square units

Area = ... × .... = ... square units

Parents' Tips:

- Ensure that your child understands that in the multiplication equation no matter the order of the factors the product will be the same, this is called the Commutative Property of Multiplication.



Activity 3

Find the area, then match the equal rectangles:

Example

Area = 2 x 6

= 12 **square units**

a) Area= .... × ....

= .... square units

b) Area= .... × ....

= .... square units

c) Area= .... × ....

= .... square units

Area= .... × ....

= .... square units

Area= .... × ....

= .... square units

Area= .... × ....

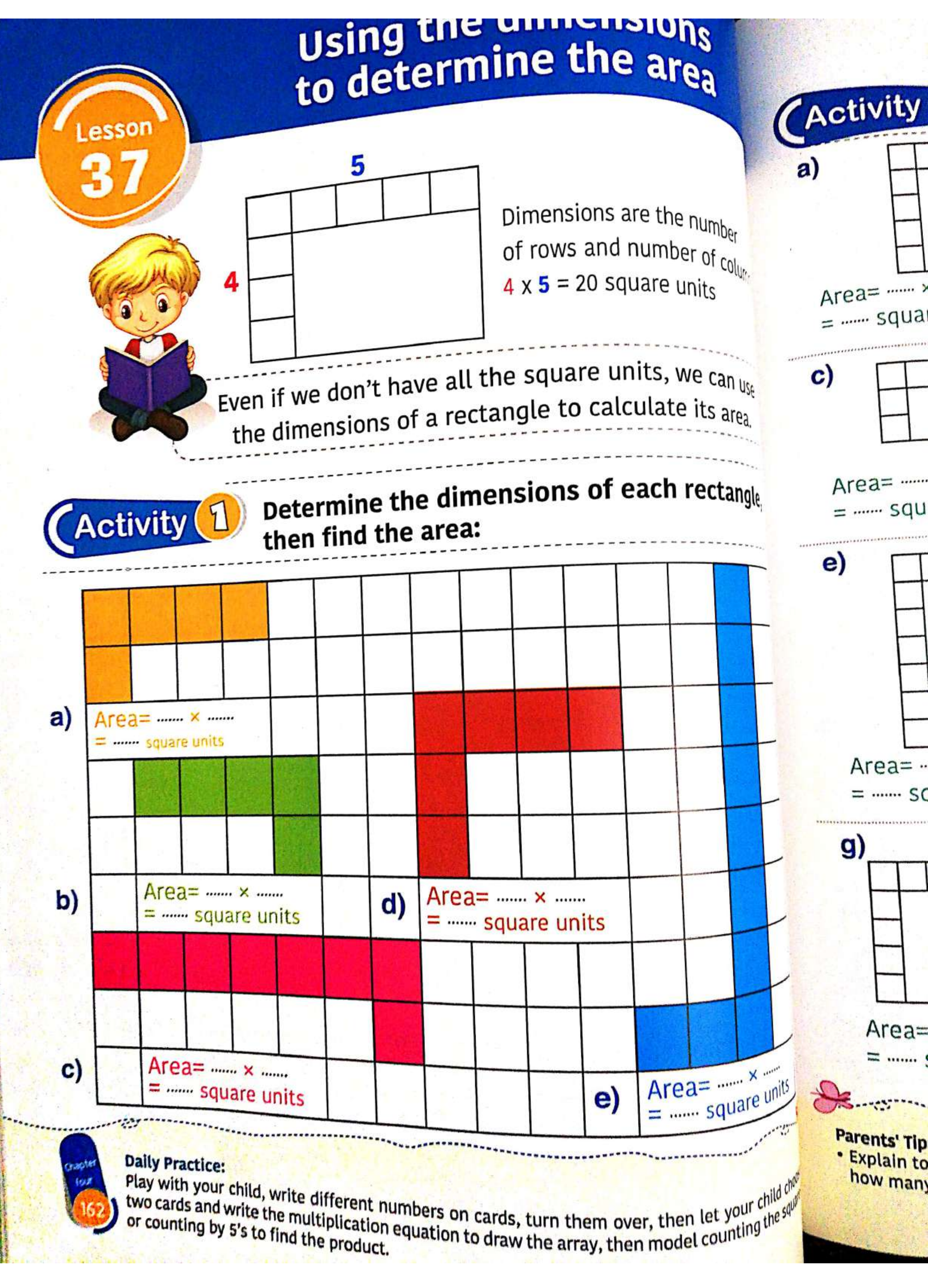
= .... square units

Area= 3 x 4

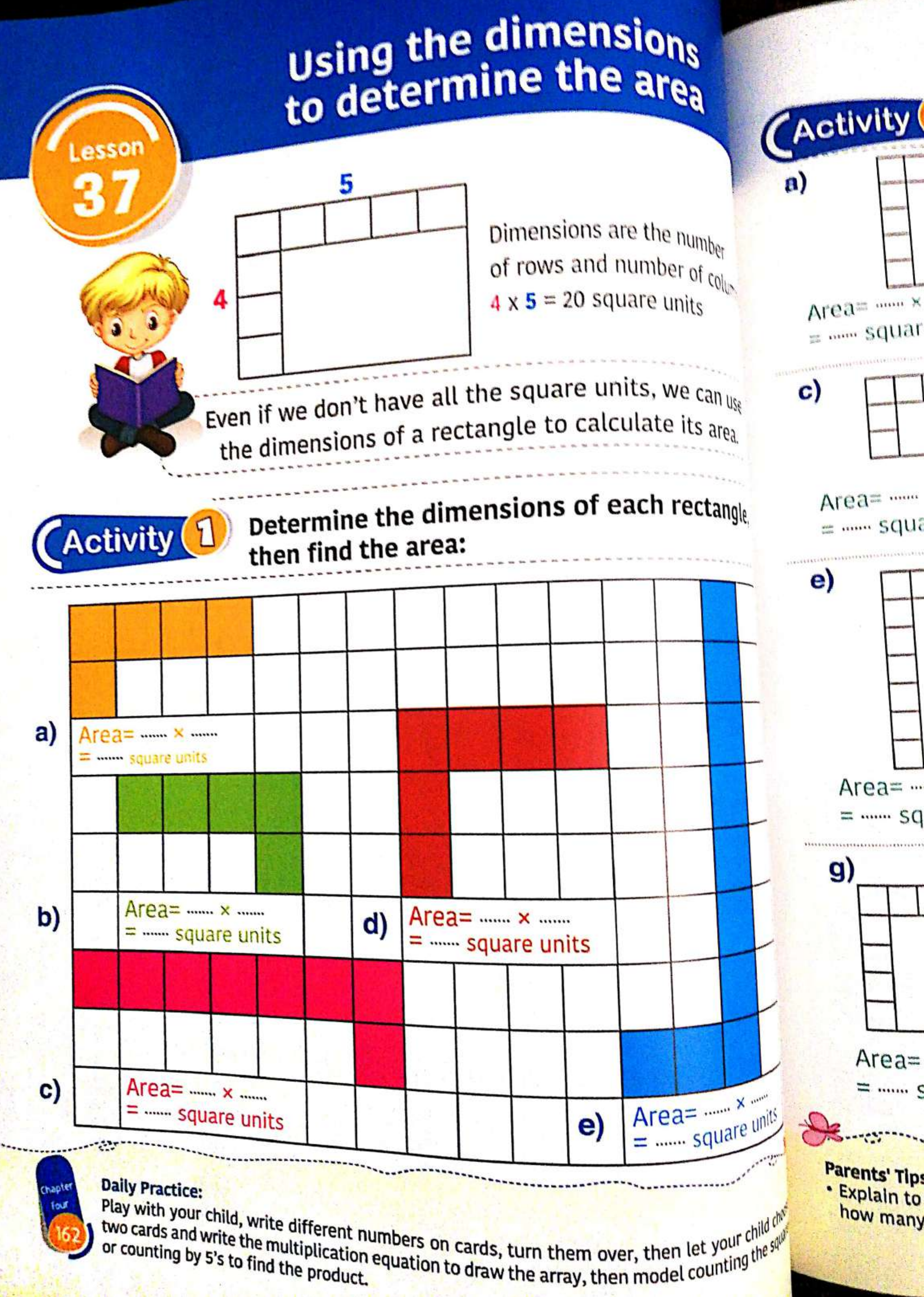
= 12 square units

I learned

- Modeling the commutative property of multiplication with the area of rectangles.



Using the dimensions to determine the area
Lesson
37
5
4
Dimensions are the number of rows and number of colum
4 x 5 = 20 square units
Even if we don't have all the square units, we can use the dimensions of a rectangle to calculate its area.
Activity 1
Determine the dimensions of each rectangle, then find the area:
a)
Area= .... × ....
= .... square units
b)
Area= .... × ....
= .... square units
d)
Area= .... × ....
= .... square units
c)
Area= .... × ....
= .... square units
e)
Area= .... × ....
= .... square units
Daily Practice:
Play with your child, write different numbers on cards, turn them over, then let your child cho two cards and write the multiplication equation to draw the array, then model counting the squ or counting by 5's to find the product.
Chapter four
162
Activity
a)
c)
e)
g)
Parents' Tip



Using the dimensions to determine the area

Lesson 37

5

4

Dimensions are the number of rows and number of colu[mns]

$4 \times 5 = 20$ square units

Even if we don't have all the square units, we can use the dimensions of a rectangle to calculate its area.

Activity 1

Determine the dimensions of each rectangle, then find the area:

a) Area= .... × ....
= .... square units

b) Area= .... × ....
= .... square units

d) Area= .... × ....
= .... square units

c) Area= .... × ....
= .... square units

e) Area= .... × ....
= .... square units

Daily Practice:

Play with your child, write different numbers on cards, turn them over, then let your child cho[ose] two cards and write the multiplication equation to draw the array, then model counting the squ[ares] or counting by 5's to find the product.

Activity

a)

Area= .... ×
= .... squar[e]

c)

Area= ....
= .... squa[re]

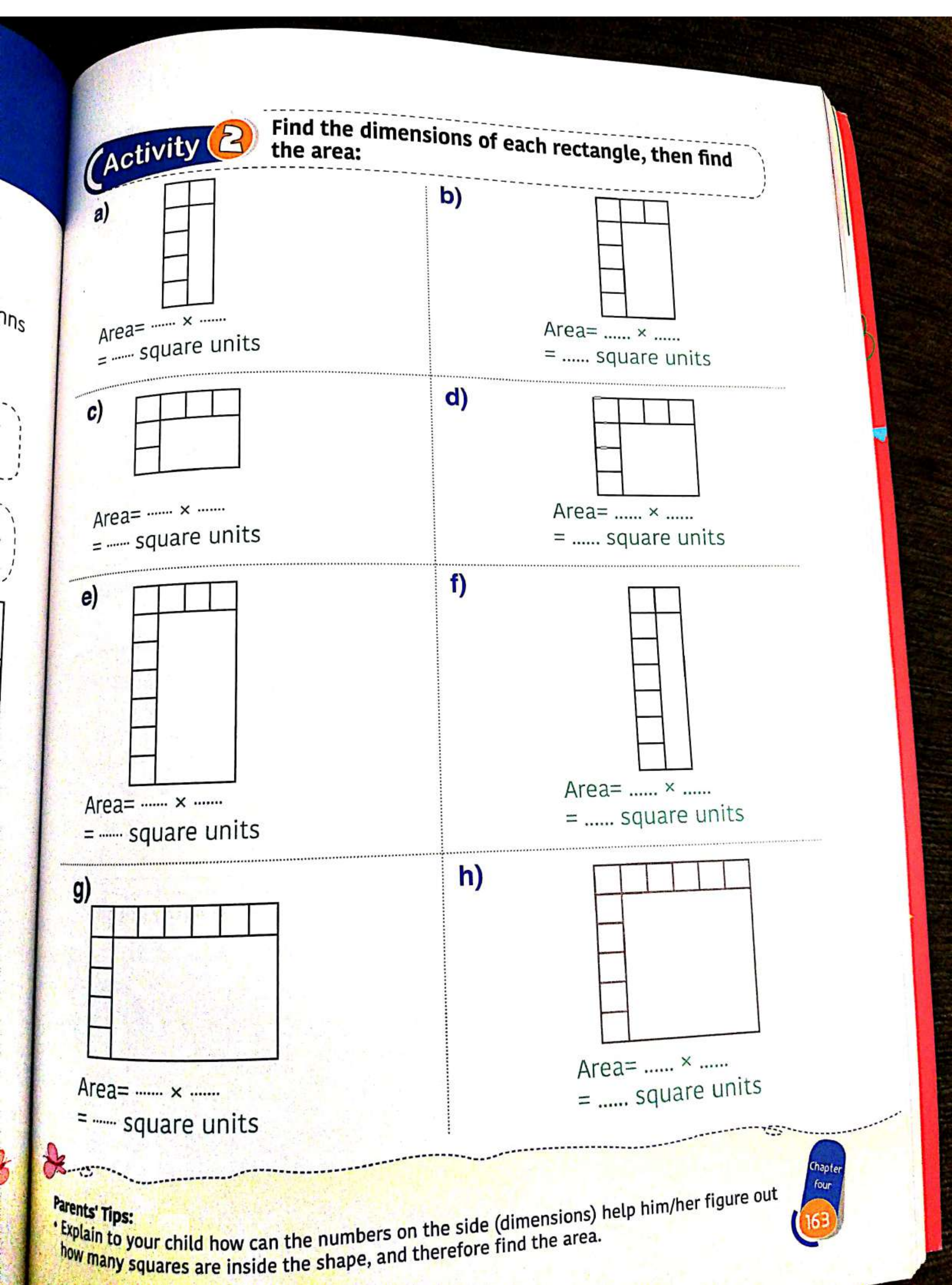
e)

Area= ....
= .... sq[uare]

g)

Area=
= .... s[quare]

Parents' Tips
• Explain to
how many



Activity 2

Find the dimensions of each rectangle, then find the area:

a)

Area= .... × ....

= .... square units

b)

Area= ...... × ......

= ...... square units

c)

Area= .... × ....

= .... square units

d)

Area= ...... × ......

= ...... square units

e)

Area= .... × ....

= .... square units

f)

Area= ...... × ......

= ...... square units

g)

Area= .... × ....

= .... square units

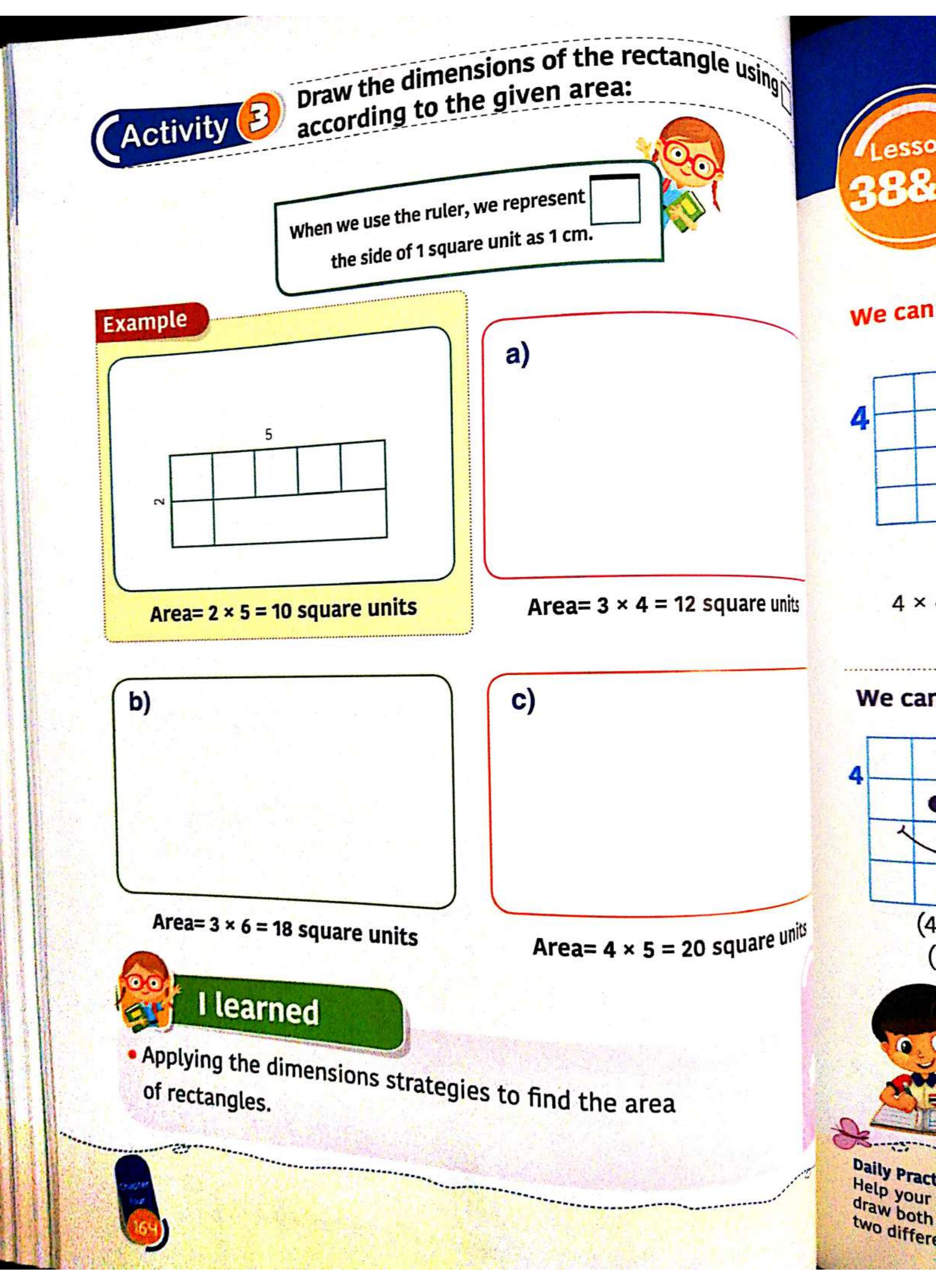
h)

Area= ...... × ......

= ...... square units

Parents' Tips:

- Explain to your child how can the numbers on the side (dimensions) help him/her figure out how many squares are inside the shape, and therefore find the area.



Activity 3 Draw the dimensions of the rectangle using according to the given area:

When we use the ruler, we represent the side of 1 square unit as 1 cm.

Example

Area= 2 × 5 = 10 square units

a)

Area= 3 × 4 = 12 square units

b)

Area= 3 × 6 = 18 square units

c)

Area= 4 × 5 = 20 square units

I learned

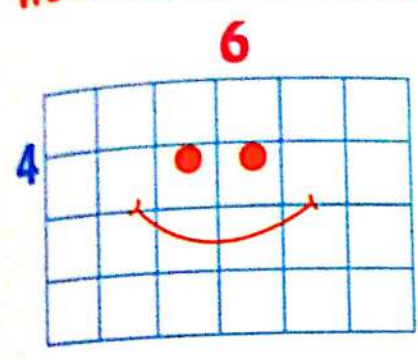
- Applying the dimensions strategies to find the area of rectangles.



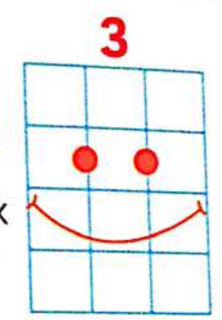
Distributive property of multiplication

Breaking apart strategy

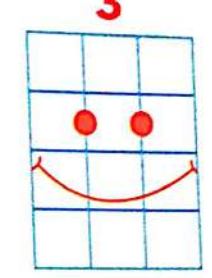
We can break the bigger dimension 6 into 3 + 3



Break into



+



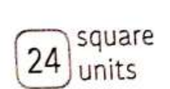
Big Array

$4 \times 6 =$ 24 square units

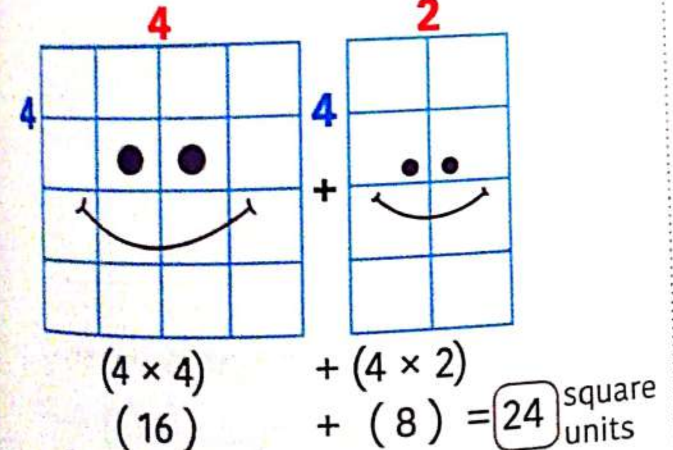
Small Array + Small Array

$(4 \times 3) + (4 \times 3)$

$(12) + (12) =$ 24 square units



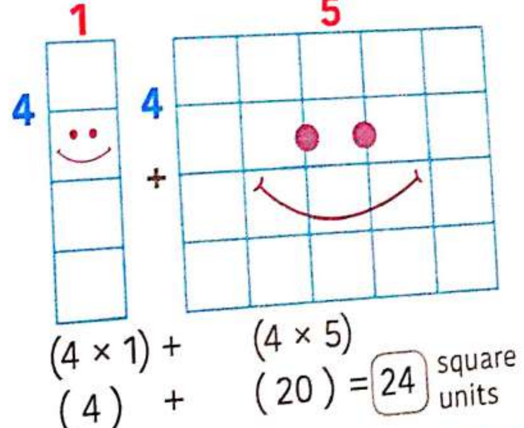
We can also break 6 into 4+2



$(4 \times 4) + (4 \times 2)$

$(16) + (8) =$ 24 square units

We can also break 6 into 1+5



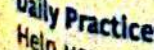
$(4 \times 1) + (4 \times 5)$

$(4) + (20) =$ 24 square units



Breaking a multiplication problem into 2 smaller problems, then adding their products together

This is called **Distributive property of multiplication.**

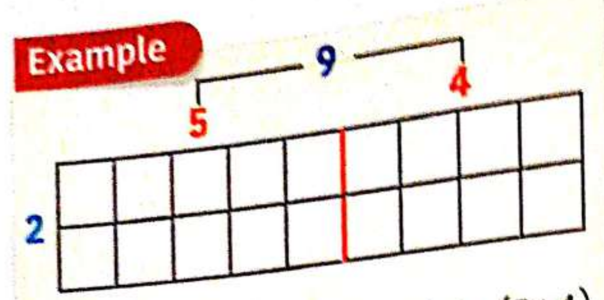


Daily Practice:
Help your child double-check his/her understanding of the example above by using a ruler to draw both rectangles to ensure that your child knows that he/she can break one rectangle into two ...



Activity 1 Use the distributive property to split the given rectangles into 2 smaller rectangles to find the area

Example



Break 9 the big dimension into (5+4)

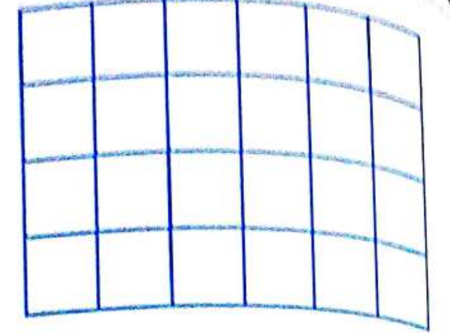
(2 × 5) + (2 × 4)

(10) + (8) = 18 square units

or

(2 × 9) = 18 square units

a)



The big dimension (.....) into (.....+.....)

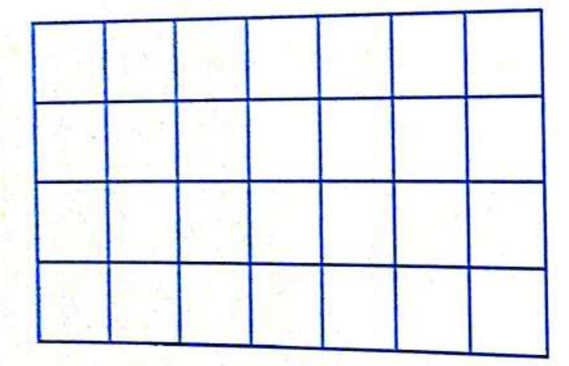
(...... × ......) + (...... × ......)

(......) + (......) = ... square units

or

(4 × 6) = ... square units

b)



The big dimension (.....) into (.....+.....)

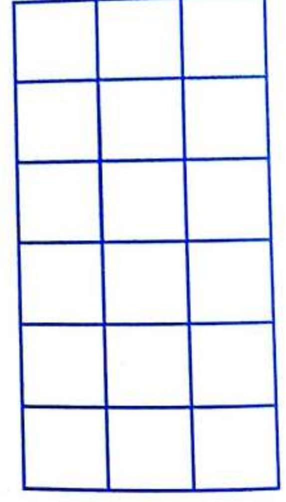
(...... × ......) + (...... × ......)

(......) + (......) = ... square units

or

(4 × 7) = ... square units

c)



The big dimension (.....) into (.....+.....)

(...... × ......) + (...... × ......)

(......) + (......) = ... square units

or

(6 × 3) = ... square units

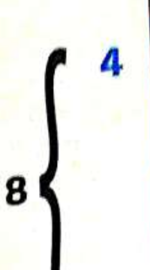
Parents' Tips:

• Explain to your child that he/she needs to break the bigger dimensions into 2 small numbers and it will be easier for him/her if these 2 small numbers are equal.



Activit

Example



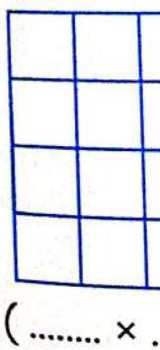
(4 × 3) +

(12) + (1

or

(8 × 3)

b)

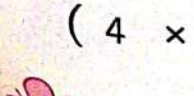


(........ × .

(......) +

or

(4 ×

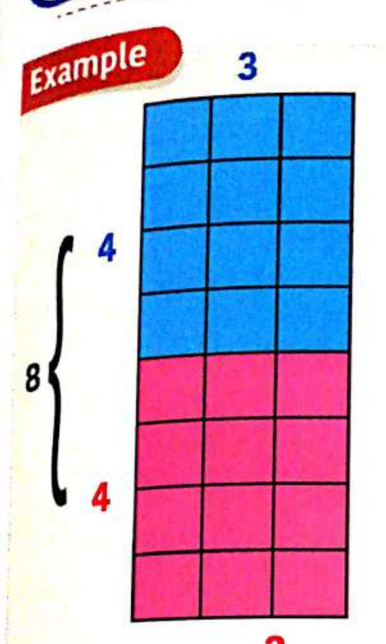


Parents' Tips:

•Practice with strategies.

Activity 2 Color to break the arrays, then find the area using distributive property:

Example



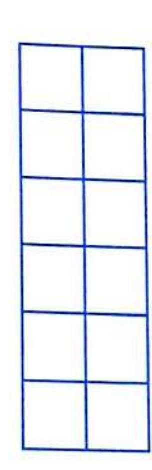
(4 × 3) + (4 × 3)

(12) + (12) = 24 square units

or

(8 × 3) = 24 square units

a)



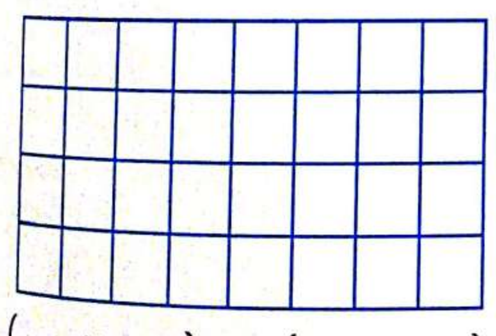
(......... × ....) + (...... × ......)

(......) + (......) = ... square units

or

(6 × 2) = ... square units

b)



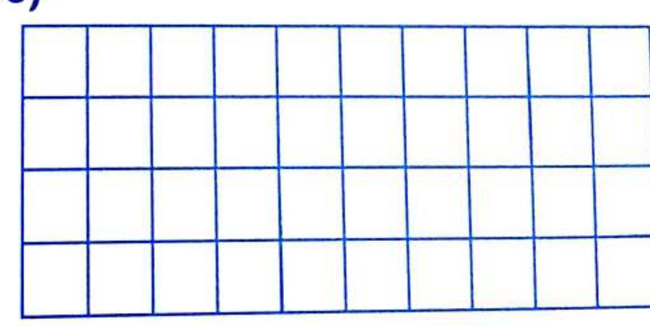
(....... × ....) + (...... × ......)

(......) + (......) = ... square units

or

(4 × 8) = ... square units

c)



(...... × ......) + (...... × ......)

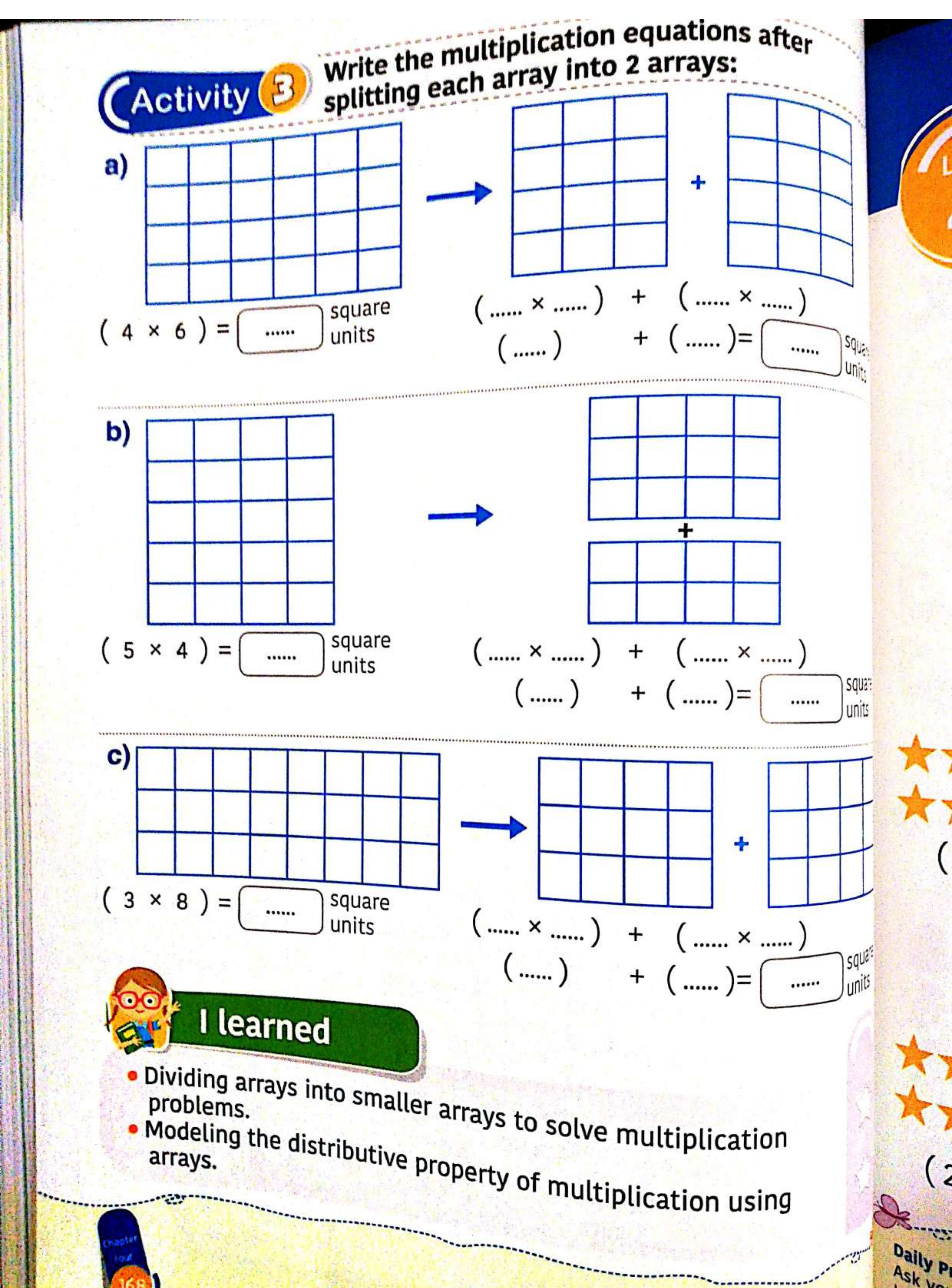
(......) + (......) = ... square units

or

(4 × 10) = ... square units

Parents' Tips:

- Practice with your child to solve the above activity by using more than one way of breaking down strategies.



Activity 3 Write the multiplication equations after splitting each array into 2 arrays:

a)

(4 × 6) = ... square units

(...... × ......) + (...... × ......)

(......) + (......) = ... square units

b)

(5 × 4) = ... square units

(...... × ......) + (...... × ......)

(......) + (......) = ... square units

c)

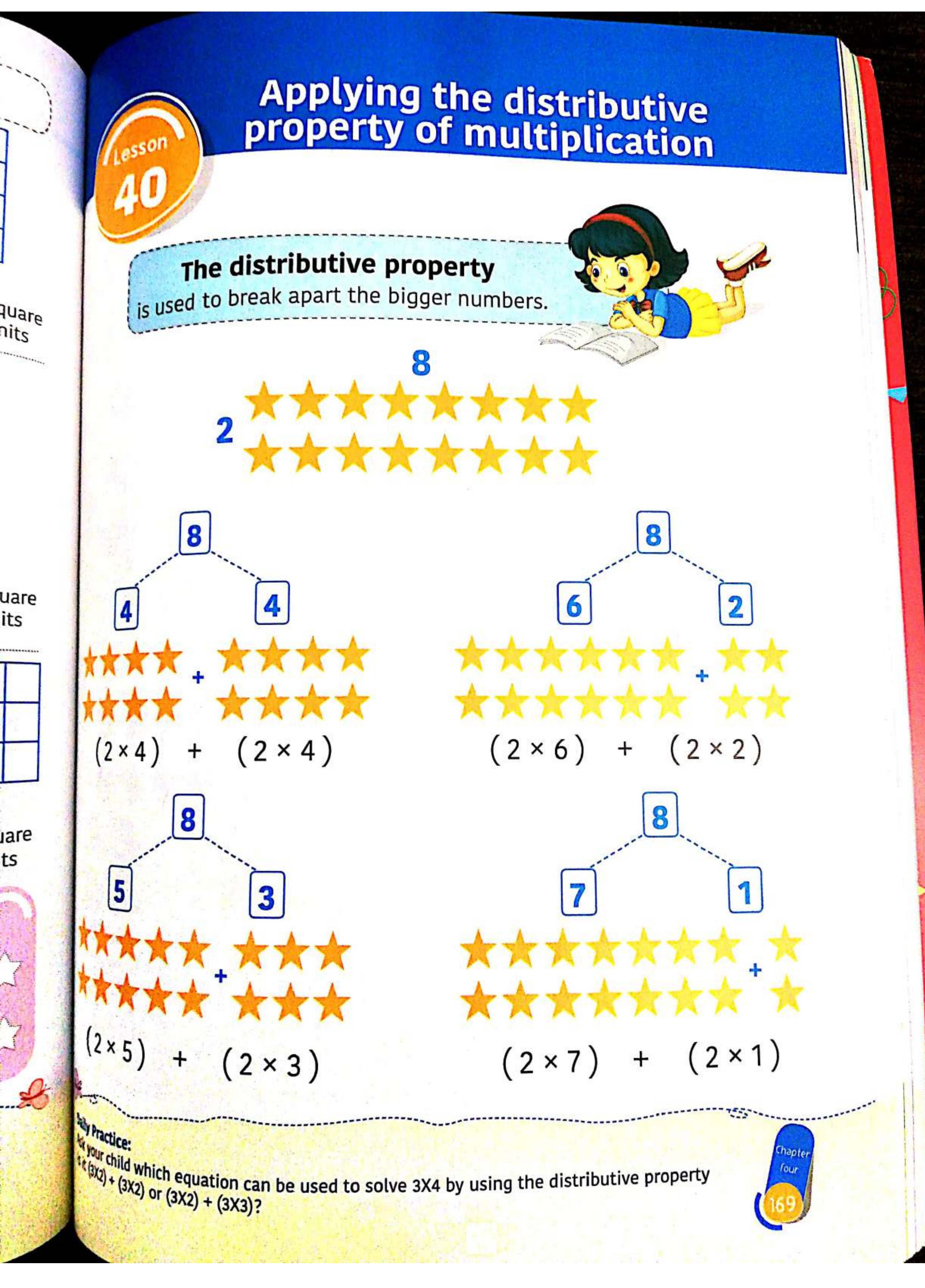
(3 × 8) = ... square units

(...... × ......) + (...... × ......)

(......) + (......) = ... square units

I learned

- Dividing arrays into smaller arrays to solve multiplication problems.
- Modeling the distributive property of multiplication using arrays.



Lesson 40

Applying the distributive property of multiplication

The distributive property
is used to break apart the bigger numbers.

8

2

8 → 4 and 4

$(2 \times 4) + (2 \times 4)$

8 → 6 and 2

$(2 \times 6) + (2 \times 2)$

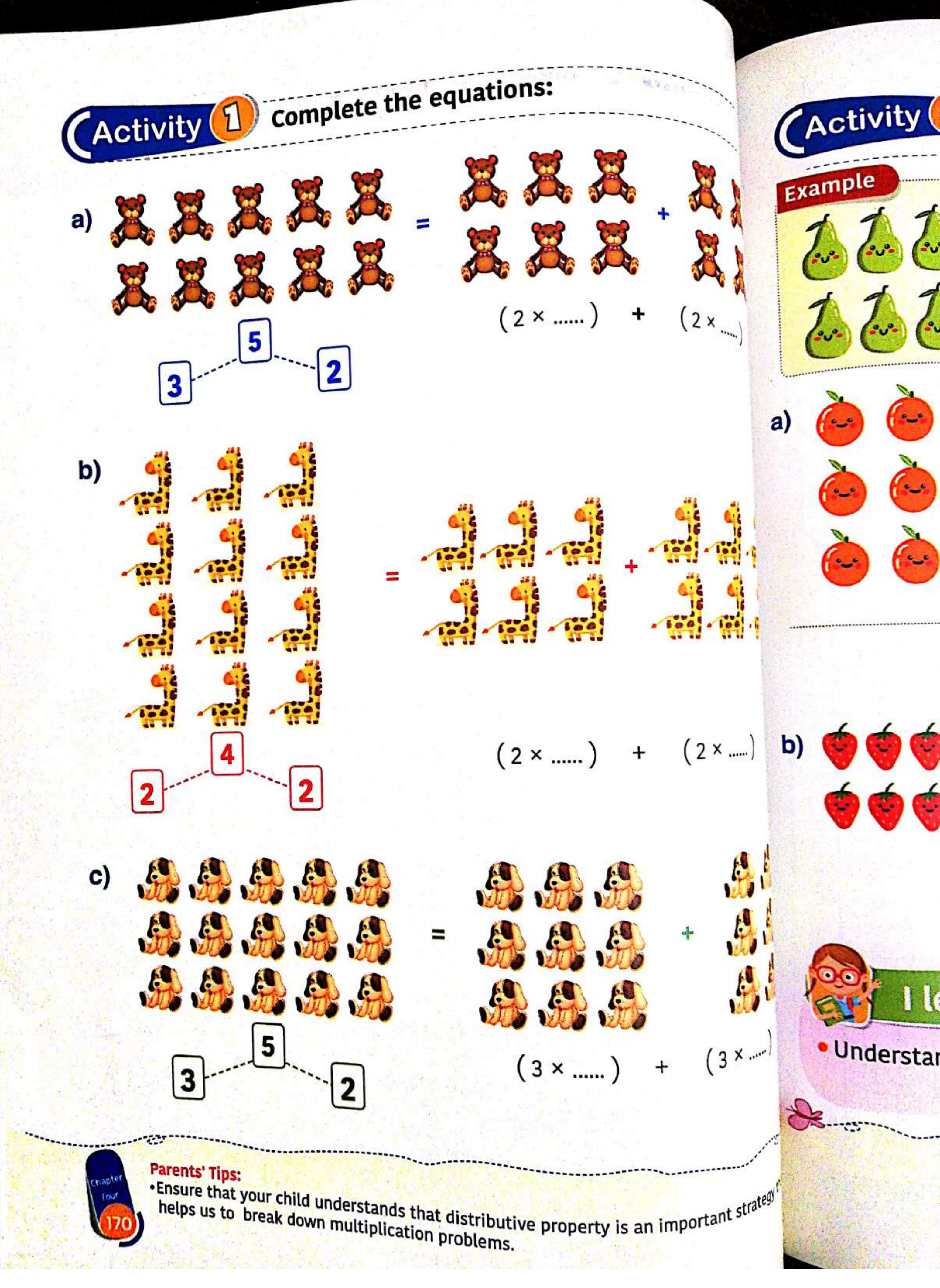
8 → 5 and 3

$(2 \times 5) + (2 \times 3)$

8 → 7 and 1

$(2 \times 7) + (2 \times 1)$

Practice:
your child which equation can be used to solve 3X4 by using the distributive property
(3X2) + (3X2) or (3X2) + (3X3)?


Activity 1 Complete the equations:
a)
=
+
(2 × ......) + (2 × ......)
5
3
2
b)
=
+
(2 × ......) + (2 × ......)
4
2
2
c)
=
+
(3 × ......) + (3 × ......)
5
3
2
Parents' Tips:
•Ensure that your child understands that distributive property is an important strategy
helps us to break down multiplication problems.
Chapter four
170
Activity
Example
a)
b)
Understar

Activity 2

Break down the following arrays into 2 different ways, then record your equations:

Example

(2 × 2)	+	(2 × 3)
(2 × 4)	+	(2 × 1)

5 → 2, 3

5 → 4, 1

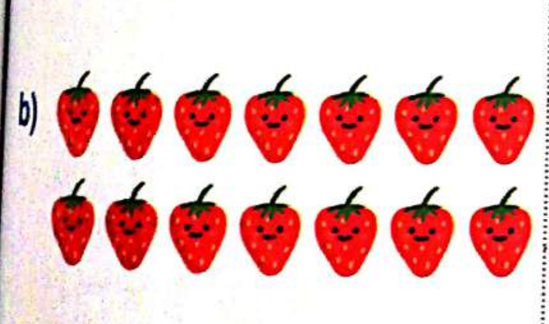
a)

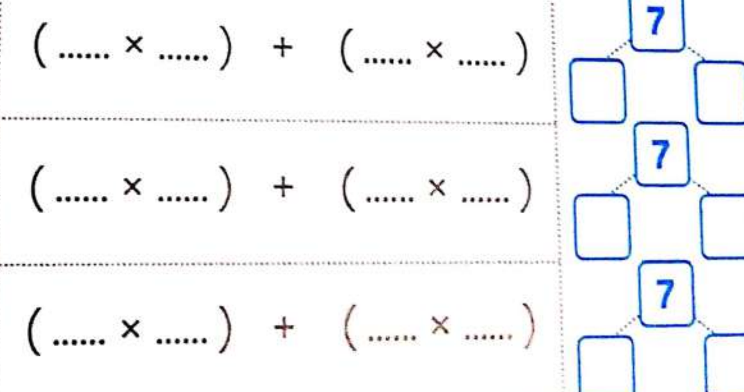
(...... × ......)	+	(...... × ......)
(...... × ......)	+	(...... × ......)

4 → ☐, ☐

4 → ☐, ☐

b)





(...... × ......)	+	(...... × ......)
(...... × ......)	+	(...... × ......)
(...... × ......)	+	(...... × ......)

7 → ☐, ☐

7 → ☐, ☐

7 → ☐, ☐

I learned

- Understanding the distributive property of multiplication.